Public Utilities

Volume 67 No. 5 March 2, 1961

MUNICIPAL GAS PLANT SELLS OUT

By Robert C. Hayes

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Why Not Start Downtown on Urban Renewal?

By James H. Collins

« »

A Forward Look at Farm Electrification

By Virgil Marvin

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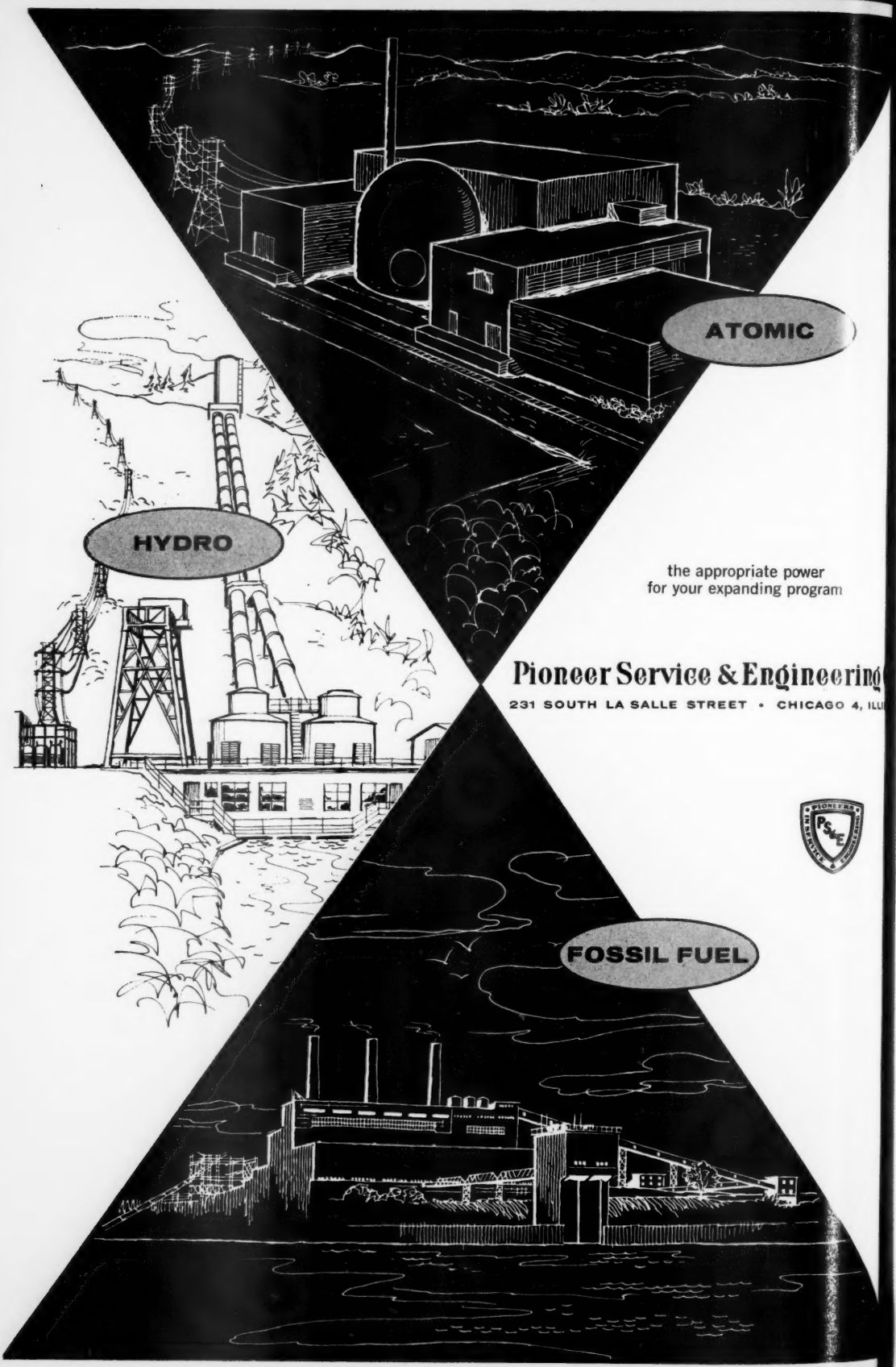
American Business and the Cold War



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Public Utilities FORTNIGHTLY

VOLUME 67 MARCH 2, 1961 NUMBER 5

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ARTICLES

Municipal Gas Plant Sells Out . . . *Robert C. Hayes* 289
What happens when a municipally owned gas utility faces bankruptcy and must be replaced by an investor-owned company?

Why Not Start Downtown on Urban Renewal? . . . . . *James H. Collins* 297
The author discusses the part utilities have to play in bringing shoppers back to the downtown stores.

A Forward Look at Farm Electrification . . . . . *Virgil Marvin* 306
Plans for education and utilization of rural electrification services.

FEATURE SECTIONS

Out of the Mailbag 313
Washington and the Utilities 314
Telephone and Telegraph 319
Financial News and Comment . . . . . *Owen Ely* 322
What Others Think 331
American Business and the Cold War 331
Universities and Atomic Development 332
Energy Consumption in 1975 335
TVA Fuel Costs 336
Volkswagen Denationalizes 339
The March of Events 341
Progress of Regulation 345
Industrial Progress 15

• *Pages with the Editors* . 6 • *Utilities Calendar* 13
• *Coming in the Next Issue* 10 • *Frontispiece* 14
• *Remarkable Remarks* . . 12 • *Index to Advertisers* . . 26

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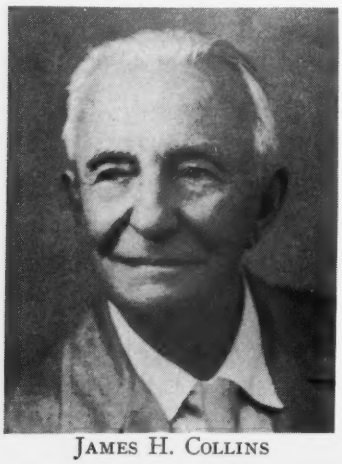
LEADERSHIP THROUGH CREATIVE ENGINEERING

Pages with the Editors

JUDGING by the early appointments of the Kennedy administration to federal agencies which have contact with or are of special interest to public utilities, a background based on government ownership is quite acceptable. This is not surprising and is in conformity with the platform of the Democratic party, on which President Kennedy was elected.

GOVERNMENT ownership and operation, at least in the power industry, is after all an accomplished fact and we must expect to see its supporters and careerists taking their place in allied activities of government. Two or three decades ago there might have been more complaint from the business-managed segment of the economy, but with one-fifth of the electric power industry—at least in the volume of public sales—operated by government agencies, mainly federal, it is to be expected the government ownership careerist of today will become another sort of public official of tomorrow.

PERHAPS in the process, both the government and business-managed areas of public utility operations will discover more community of interest based on common operating problems and experience. And so we see in the Interior Department, on the Federal Power Commission, in the Rural Electrification Administration, and elsewhere, the emergence of government ownership careerists under the auspices of the new administration. There will doubtless be some skepticism about whether this is a good thing. But good or bad, it seems to be here to stay for a while at least.

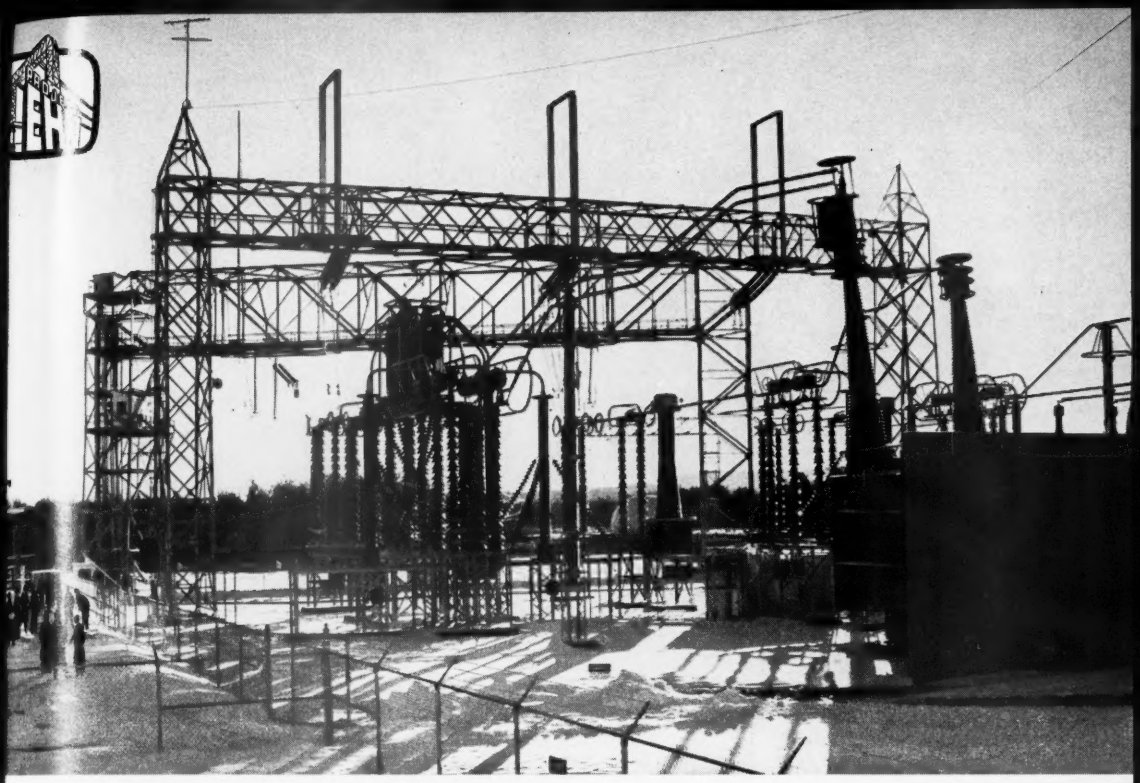


JAMES H. COLLINS

ROBERT C. HAYES

THE opening article in this issue deals with one of the oldest forms of government ownership in the utility field in the United States—the municipal plant. But at the same time it deals with an area of public utility operation which has not been characterized by very much government ownership activity—gas distribution. But there have been some developments along this line and they have been growing rather than receding in recent years, although not spectacular. Hence the interest in what happens when a city goes into the gas business.

PERHAPS Moses Lake, Washington, is not a typical experience, but it certainly was an interesting one. When a municipally owned gas utility in a progressive small city of 11,000 faces bankruptcy after only three years of operation and



Project EHV is energized

Super-voltage Research Will Help Solve Transmission Problems

720,000 VOLTS, the highest voltage ever attained on a transmission line, were recorded on December 8, 1960, during energizing ceremonies at the north section of Project EHV, a giant outdoor laboratory located near Pittsfield, Massachusetts. The objective for the 4.3-mile, prototype extra-high-voltage power system: to increase knowledge of EHV transmission, thus helping electric utilities to satisfy efficiently and economically the nation's soaring demand for electricity.

ADVANCED EQUIPMENT at the $7½-million Project includes a 650-kv, 40-mva power transformer, four 650-kv disconnect switches, and eighteen towers of four materials and nine designs. More than 260 instruments are now recording or being installed to record electrical, meteorological, and mechanical data (10 million readings annually) for computer processing.

TESTING will be conducted at 460 to 500 kv until mid-1961 and at 650 to 750 kv after that. In late 1962 the line will be integrated with the adjoining Western Massachusetts Electric Company system to obtain operating experience as well as further test data.

ELEVEN COMPANIES* have joined General Electric to build this system. Two advisory groups, one composed of executives of fifteen American and Canadian utilities and the other of fourteen consulting engineers, are taking an active part in guiding research. Project EHV is an outstanding example of co-operation by utilities, consultants, and manufacturers to help solve load growth problems.

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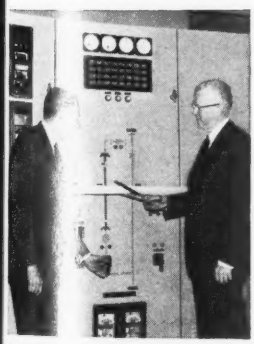

H. J. C iwell, President of Western Massachusetts Electric Con ny, energizes Project EHV R. L. Gibson, Vice Presiden of G.E., cuts ribbon.

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Western Massachusetts Electric Co.

GENERAL ELECTRIC

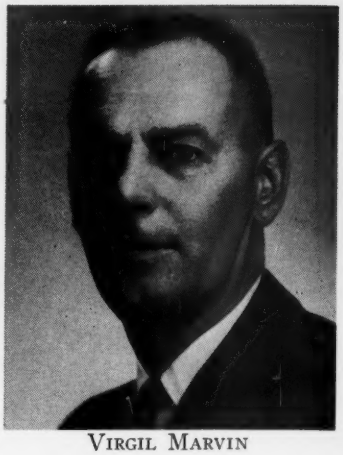
must be replaced by an investor-owned company, the situation is deserving of some special notice. ROBERT C. HAYES, a professional writer of Mercer Island, Washington, has written an account of the recent election in Moses Lake which went into the gas utility business in 1957 and is now out of the utility business as the result of an overwhelming vote of its citizens to sell. What went wrong and why is told in MR. HAYES' article.

THE author is a public relations consultant in Seattle, Washington, who has had considerable experience in utility operations. He is former vice president and executive director of the Association of Washington Gas Utilities. A graduate of the University of Washington, MR. HAYES has been engaged in public relations and newspaper work in the Pacific Northwest for more than twenty years.

HE recently resigned his position with the Association of Washington Gas Utilities in order to revisit the South Pacific islands where he served as a Marine Corps air intelligence officer in World War II. Since his return to Seattle, he has written more than two dozen magazine articles, mostly about the South Seas. This is his first contribution to PUBLIC UTILITIES FORTNIGHTLY, although he was quoted extensively in a previous article on private *versus* public ownership of gas by Frank C. Sullivan, public relations director of Southern California Gas Company.

* * * *

ONE topic which the new Kennedy administration has turned into a very active conversation piece has to do with urban renewal. Of course, the Eisenhower administration gave much attention to this subject, but the new régime has even currently thought about creating a Cabinet office to emphasize the government's responsibility in this area. At the various levels of government—federal, state, county, and local—blueprints are being drawn and plans are being discussed for reclaiming downtown areas.



VIRGIL MARVIN

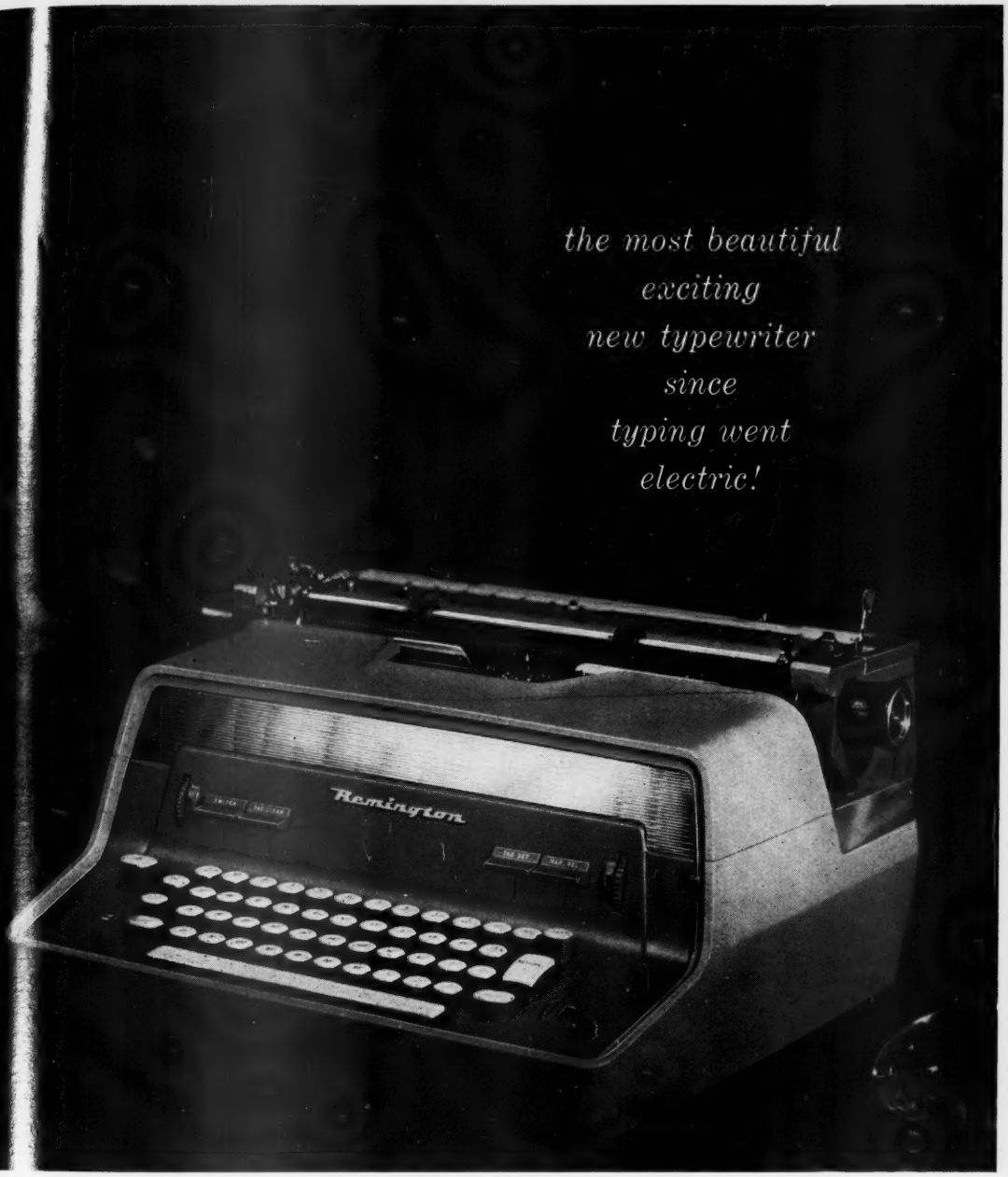
NATURALLY, public utilities of all kinds as well as merchants and other nonutility businessmen of all kinds, are interested in what will happen to our "downtown" areas. Should they pull up stakes and follow the pell-mell flight to the suburbs or see what can be done about rejuvenating the once prosperous central districts commercially, residentially, and otherwise? JAMES H. COLLINS, Washington, D. C., business writer, in his article beginning on page 297, has concentrated on the problem of bringing shoppers back to the big stores downtown.

* * * *

VIRGIL MARVIN, rural sales manager of The Toledo Edison Company, whose article "A Forward Look at Farm Electrification" begins on page 306, is a native of Toledo, Ohio, and a graduate (BS) of Michigan State University. He put in seven years as a rural sales engineer with The Toledo Edison Company before entering the Soil Conservation Service of the United States Department of Agriculture. After three years of this experience, he returned to Toledo Edison where he is now manager of the company's rural sales department.

THE next number of this magazine will be out March 16th.

The Editors



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Coming in the Next Issue...

—(MARCH 16, 1961, ISSUE)—

THE FOLKLORE OF REGULATION

This is a period of much discussion not only about how to improve the procedures and operations of the regulatory commissions, but also about reviving of basic considerations as to what these agencies were supposed to accomplish in the first place. The recent Landis report and a number of other task force reports, studies, etc., have worked over this well-harrowed ground. In this discussion a real veteran of regulation, President Everett C. McKeage of the California Public Utilities Commission, goes back over the fundamentals and tells us about some of the realities as well as the myths of regulation. Drawing upon his own background of experience in both the judicial and regulatory fields, this author differs with some of the implications of the Landis report, especially in the matter of interposing any "supervision" or control by the executive branch of the government, which would interfere with regulatory independence.

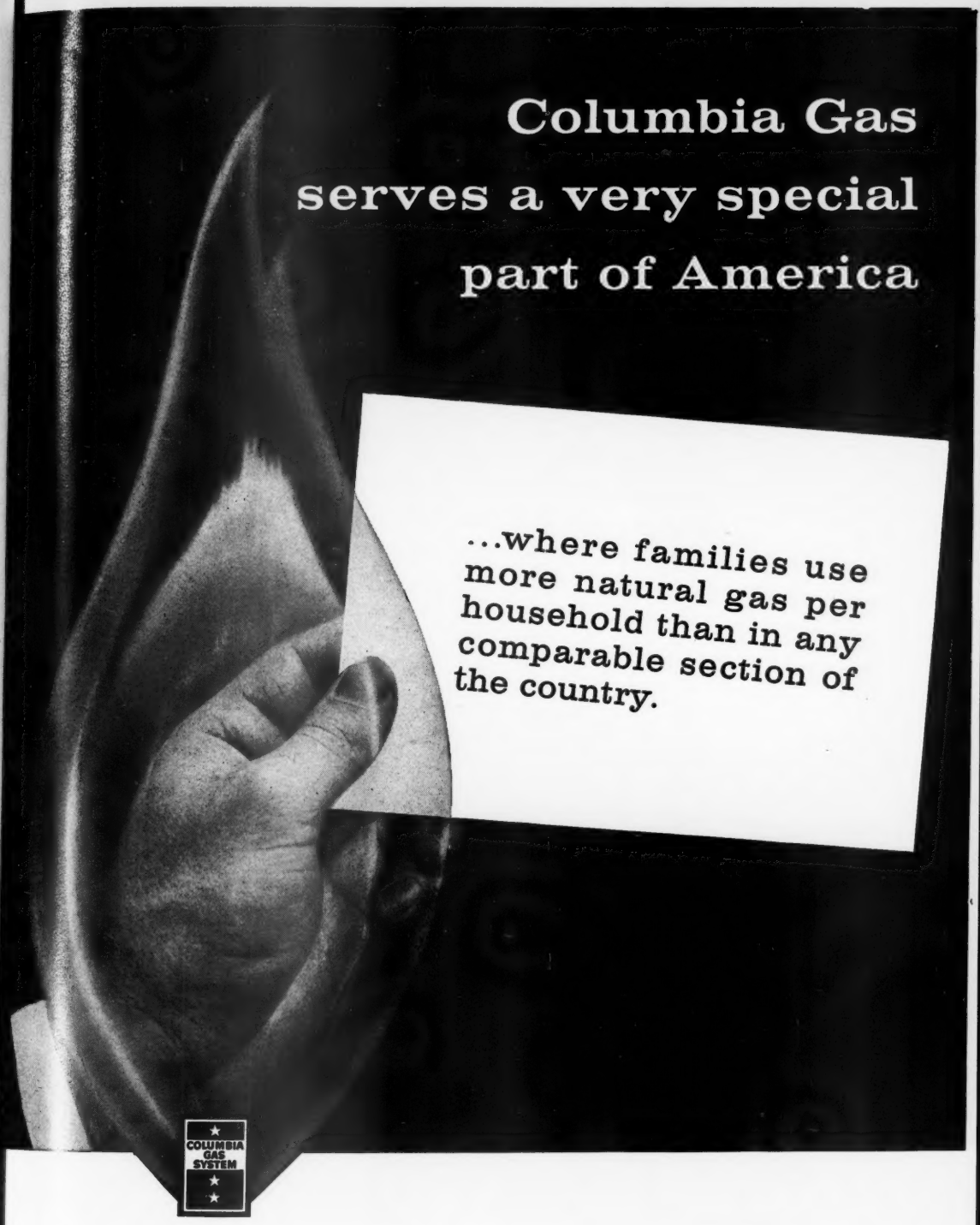
INTRODUCING SUPPLY AND DEMAND CONTROL FOR GAS PRODUCER REGULATION

Even before the U. S. Supreme Court in the Phillips decision of 1954 decided that gas producers were subject to FPC rate regulation, arguments had been advanced against releasing the producers from regulation. Some of these arguments have been legal, some on the economic merits. Arthur K. Lee, chairman of the board, United Cities Gas Company, has been among those who have opposed such release of producer controls on ground that gas supply is sufficient unless pipelines continue to use two-part rates to shift gas costs from inferior, industrial interruptible, and dump gas users to residential and firm customers. In this article, he contends that unless this practice is stopped, the gas reserves will be inadequate.

BETTER RATE DESIGN FOR BETTER EARNINGS

Development of a sound rate program requires direction by an experienced expert who can weigh the various factors involved. It must be properly administered and co-ordinated with an effective sales program. Cost-to-serve studies and market studies serve as excellent guides, as well as rate audits. Clifford O. Thurlow, senior consultant of Commonwealth Services, Inc., has written this explanation of how better rate design and administration are often more effective than frequent rate increases when improved revenues are needed. Some practical suggestions for audit and control of rate schedules and administration which can, in this author's opinion, prove far more useful, flexible, and convenient than the more drastic process of seeking authority for rate increases.

AND IN ADDITION . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***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Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

JOHN F. KENNEDY
President of the United States.

"I speak today in an hour of national peril and national opportunity. Before my term has ended, we shall have to test anew whether a nation organized and governed such as ours can endure."

WILLIAM F. BUTLER
Vice president, Chase Manhattan Bank.

". . . another recession could start in 1961. . . . We usually move ahead too rapidly in periods of expansion, and so create the necessity of periods of recession to consolidate our gains and prepare for a renewed advance."

EDWARD W. BARRETT
Dean, Graduate School of Journalism, Columbia University.

"Ponderous prose has become too much the hallmark of our great scholars and experts. Some of our scientists are even having trouble making themselves clear to other scientists. The professional writer must be the skilled interpreter."

EDITORIAL STATEMENT
The Saturday Evening Post.

"By and large, the excessive demands of producers are restrained by competition. As for the unions, although they are often able to force wages for their members beyond the point justified by productivity, they must face the possibility that by too drastic wage demands they could price themselves out of jobs."

EDITORIAL STATEMENT
The Wall Street Journal.

"When voluntary [control] becomes mandatory it is highly questionable whether freedom of enterprise remains. There is no reason to believe that the substitution of an all-powerful federal oil bureaucracy for a system of many competing companies would be any more successful in the U. S. than it is in avowedly socialist countries."

FREDERICK R. KAPPEL
President, American Telephone and Telegraph Company.

"We have considered ourselves different from nonregulated industry for so long that we may not have noticed how the gap is narrowing. When our successors meet to discuss such matters in a few years, they may search hard to find real differences. So I believe we should begin now to consider common criteria by which we all will be judged."

JOHN M. HARLAN
Associate Justice, United States Supreme Court.

"Business reality demands that natural gas companies should not be precluded by law from increasing the prices of their product whenever that is the economically necessary means of keeping the intake and outgo of their revenues in proper balance; otherwise procurement of the vast sums necessary for the maintenance and expansion of their systems through equity and debt financing would become most difficult, if not impossible."

Utilities Events Calendar

CHECK THESE DATES:

Mar. 2-3—Public Utilities Seventh Annual Marketing Seminar will be held, Houston, Tex.

Mar. 2-3—Southern Gas Association will hold sales executives' conference, Dallas, Tex.

Mar. 2-4—Controllers Institute of America will hold southern conference, Houston, Tex.

Mar. 5-7—Southern Safety Conference and Exposition will be held, Atlanta, Ga.

Mar. 5-8—Third Annual Lighting Exposition will be held, New York, N. Y.

Mar. 5-9—American Society of Mechanical Engineers will hold annual gas turbine conference, Washington, D. C.

Mar. 7—Kentucky Telephone Association will hold annual convention, Lexington, Ky.

Mar. 8—Gas Appliance Engineers Society of the Midwest Chapter will hold meeting, Chicago Heights, Ill.

Mar. 8-10—Instrument Society of America will hold annual conference on instrumentation for the iron and steel industry, Pittsburgh, Pa.

Mar. 9-10—AIEE, IAS, and IRE will hold second symposium on engineering aspects of magnetohydrodynamics, University of Pennsylvania, Philadelphia, Pa.

Mar. 12-14—Texas Telephone Association will hold annual convention, Houston, Tex.

Mar. 13-14—Pennsylvania Electric Association, Residential Committee, will hold meeting, Reading, Pa.

Mar. 13-17—National Association of Corrosion Engineers will hold annual conference and corrosion show, Buffalo, N. Y.

Mar. 16—American Water Works Association, New England Section, will hold annual meeting, Boston, Mass.

Mar. 16-17—Edison Electric Institute, Industrial Relations Committee, will hold meeting, Washington, D. C.

Mar. 16-17—New England Gas Association will hold annual meeting, Boston, Mass.

Mar. 16-17—Oklahoma Utilities Association will hold annual meeting, Tulsa, Okla.

Mar. 16-17—Pennsylvania Electric Association, Street and Highway Lighting Committee, will hold meeting, Lancaster, Pa.

Mar. 16-17—Southern Gas Association will hold distribution and accounting management conferences, Atlanta, Ga.

Mar. 20-21—Edison Electric Institute will hold sales conference, Chicago, Ill.

Mar. 20-21—Tennessee Valley Public Power Association will hold annual meeting, Chattanooga, Tenn.

Mar. 20-22—American Gas Association, General Management Section, will hold annual conference, Charleston, S. C.

Mar. 20-23—Institute of Radio Engineers will hold international convention, New York, N. Y.

Mar. 21-23—American Power Conference will be held, Chicago, Ill.

Mar. 22-24—American Water Works Association, Illinois Section, will hold annual meeting, Chicago, Ill.

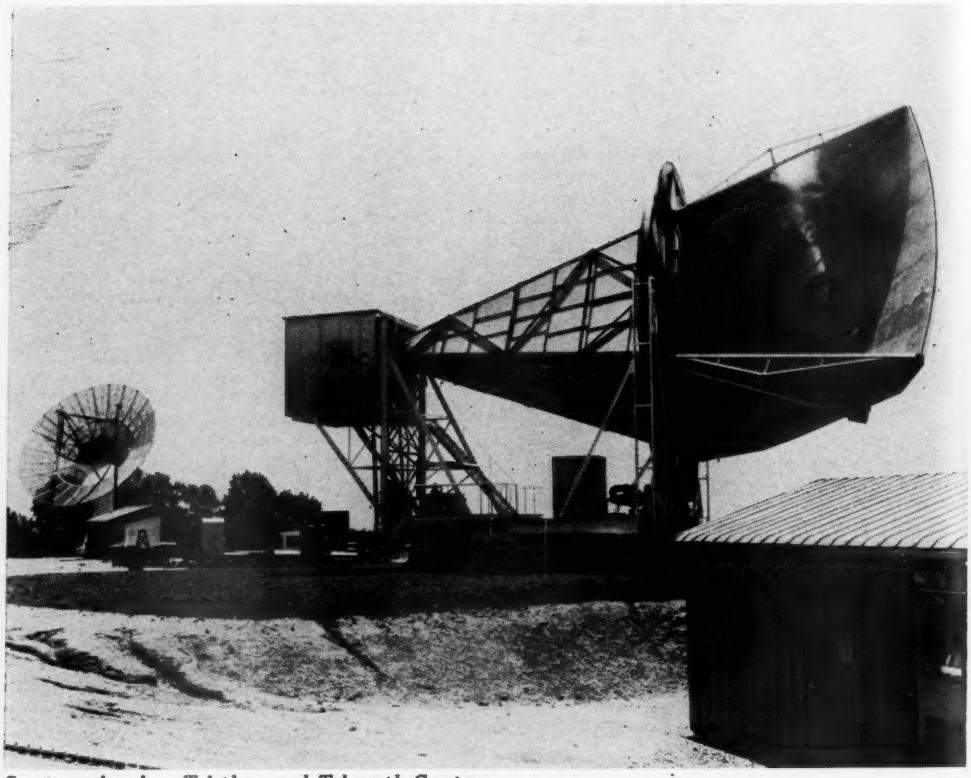
Mar. 23-24—Iowa Telephone Association will hold annual convention, Des Moines, Iowa.

Mar. 23-24—Pennsylvania Electric Association, General and Customer Accounting Committee, will hold meeting, Philadelphia, Pa.

Mar. 27-28—Mid-West Gas Association will hold annual meeting and convention, Omaha, Neb.

Mar. 27-29—Southeastern Electric Exchange will hold annual conference, Boca Raton, Fla.

Mar. 27-30—National Association of Refrigerated Warehouses, Inc., and The Refrigeration Research Foundation will hold meeting, San Francisco, Cal.



Courtesy, American Telephone and Telegraph Company

Birthplace of Space Communications

Holmdel, New Jersey, where Bell Telephone Laboratories worked in co-operation with the National Aeronautics and Space Administration on Project Echo, contains space communications equipment that pioneered in initial space communications experiments. Three basic components are 60-foot "dish" transmitting antenna—at left—the 50 x 50-foot horn reflector receiving system—center— and a beacon tracking unit for directing the antenna systems.

Public Utilities
FORTNIGHTLY

VOLUME 67 MARCH 2, 1961 NUMBER 5

Municipal Gas Plant Sells Out

An account of a recent election in the city of Moses Lake, Washington, which went into the gas utility business in 1957. The vote was overwhelming to sell, but the reasons which led up to the inevitable are contained in this blow-by-blow description of what went wrong and why in Moses Lake.

By ROBERT C. HAYES*

When a municipally owned gas utility in a progressive city of 11,000 persons faces bankruptcy after only three years of operation and is replaced at the city's request by an investor-owned gas company, that is news.

More often in recent years the situation has been reversed, with the private utility fighting for survival against municipal encroachment or condemnation.

But in Moses Lake, Washington, the city-owned natural gas distribution system, whose bond and engineering promoters had confidently forecast a prosperous future, was deep in financial mire even before the end of its third year. It had spent $1.2 million of municipal bonds, for which it had received but $711,000 of distribution system; it had 39 miles of mains and 1,000 service connections, but only 400 customers; and, finally, its first out-of-revenue interest payment was coming due and there were insufficient funds to meet it.

The alternatives were to double the gas rates, which would have had a regressive effect with so few customers; to default on the bonds and jeopardize the city's future credit; or to sell the system to an experienced private gas utility.

*Professional writer, resident in Mercer Island, Washington. For additional personal note, see "Pages with the Editors."

FACED with these choices, the Moses Lake electorate—which only a few years earlier had authorized bonds to establish the city in the gas business—voted last November by more than 86 per cent to abandon the municipal project and sell its properties to Cascade Natural Gas Corporation, which serves 41 other cities in Washington and Oregon.

Thus Moses Lake became the first municipal gas casualty in Washington, where natural gas became available in mid-1956.

Cascade Natural assumed interim operation of the gas department immediately following the election, and took title to the system at the beginning of 1961.

Analysis of the circumstances leading to the failure of Moses Lake's gas venture suggests weaknesses that may be found in other municipal gas utilities, or in propositions to establish new ones. Because the situation here has its parallels in many other parts of the country.

Moses Lake's problem points up the close liaison between bond houses and engineering firms in promoting municipal utilities. It focuses attention on their dual rôle as fiscal and engineering advisers to the cities, and as recipients of substantial fees for constructing and financing municipal works which they may advocate in their first capacity.

An understanding of their methods in promoting public ownership should be helpful to those who support the private ownership view, in light of the increasing numbers of city-owned gas operations in the United States each year.

AGA Statistics

THIS public ownership growth is pinpointed by the American Gas Association, which reported last year that there were 582 municipal gas systems in the country; the year before, 566. In 1950, there were only 200.

Thus a single decade has witnessed a net increase of 382 municipally operated gas utilities—a near trebling in a span of only ten years. They stretch across the nation in 35 states from Massachusetts to California, from Florida to Washington.

The cold statistics reveal that the 475 such municipal systems that have gross revenues over $25,000 annually serve more than two and a quarter-million customers and gross approximately $270 million.

They account for nearly 7 per cent of the nation's gas customers and 5.3 per cent of total gas revenues.

This alone causes concern among the advocates and managers of free enterprise.

As impressive as their customer and sales figures appear, however, they do not necessarily tell the true condition of municipal operations. Volume alone is not a criterion of success or solvency. Moses Lake was one of those in the "over $25,000" category, with 1959 gross sales of $69,500. But it was even then verging on insolvency.

Unlike privately owned gas companies, regulated by public service agencies and open to minute scrutiny, most municipal utilities are not required to submit detailed public reports of their operations. What is available often is fragmentary and obtuse, so that it is difficult at best to learn how satisfactory or how unprofitable are their operations.

But almost every year, one or more of

these city-owned gas utilities goes out of business.

Why? What factors contribute to their failure?

Let us take Moses Lake as an example.

In the period between 1951 and 1954, when natural gas was being projected for the Pacific Northwest, Moses Lake, located in the prosperous Columbia basin irrigation district hard by Grand Coulee dam, was the largest of ten Washington cities and towns that authorized bond issues to construct municipal gas works.

In each instance, the idea of municipal ownership was fostered, not by local citizens, but by combinations of bond houses and engineering firms working in teams —financial agents who would profit from the sale of gas revenue bonds, and engineers whose fees were a percentage of construction costs.

THE promoters painted attractive pictures of gas revenues that would accrue for needed city improvements. They submitted feasibility studies predicting customer saturation some 50 per cent greater than private utilities in the same region normally expect. The engineers designed extensive distribution grids reaching into all parts of the cities, regardless of population densities or other economic criteria. On this basis, the promoters promised low consumer rates and forecast high net profits for the cities.

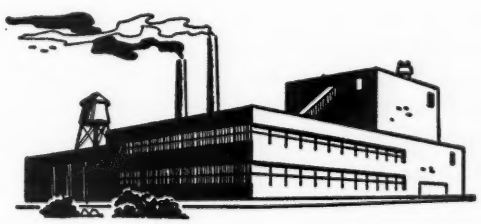
In the case of Moses Lake, the additional prospect was held out of large industrial sales to institutions several miles outside of town—sales which the city was unable to realize.

It is worth noting in passing that of the ten Washington cities that originally authorized gas revenue bonds, only four finally went the municipal route. Besides Moses Lake, they were Ellensburg, Buckley, and Enumclaw, varying in size from 2,900 to 8,750 population.

The remaining six took a second look at either the financial hazards involved or the socialistic tinge attached to municipal ownership, and backed away. Two of them granted franchises to investor-owned gas companies, and are well served. The others are waiting until private utilities consider them economically feasible to serve.

Other Cities Take Notice

THERE is a lesson for other municipalities which might harken to the siren promises of great profits in the fact that none of these four municipal operations has attained either the customers or revenues forecast in their feasibility reports —the economics that formed the cornerstones for their ventures into public ownership of gas systems. To avoid bankruptcy, Moses Lake has sold its municipal gas plant to a private utility. Enumclaw and Buckley face the prospect of substantial rate increases before the year is out to improve their financial positions. And at the beginning of its fifth year of gas operation, Ellensburg, with the greatest potential of the four,



had barely acquired the number of customers predicted for its first year.

Moses Lake was the last of the four Washington cities to begin municipal gas operations. It sold its bonds in September, 1957, at the peak of a "tight money" period, for 3.87 per cent discount and interest rates varying from 5 to 5¾ per cent. The effective rate was 6 per cent, unusually high for income tax-exempt bonds.

By the time Moses Lake's bonds were sold, the three earlier municipals had failed to show the predicted customer acquisition. Moses Lake was required to escrow three years' interest instead of the customary two years. This escrowed interest, plus the bond discount, took approximately $250,000 off the top of the $1.2 million bond issue.

The promoters earmarked another $110,000 from the bond sale as their fees for engineering, financial, and legal services. The engineers also signed a management contract with the city, calling for 2 per cent of gross gas revenues.

Altogether, promotion expenses and other nonrevenue-producing allocations took more than 40 per cent of the bond sale proceeds, leaving the city with $711,000 to construct a distribution system on which earnings could be predicated.

In approving these financial arrangements, city officials relied on their consultants' feasibility report which predicted that in the first year's operation 1,058 homes—30 per cent of the city—would convert to natural gas heat, and 320 of them would have base load requirements for gas cooking and water heating. Gross revenue, according to the report, would be $146,118 the first year, and after meeting all expenses the city would have a net profit of $49,136.

By 1960, the report stated, 45 per cent of the homes would be using natural gas, sales would climb to $226,229 annually, and the city would reap $85,665 net income.

Promises *versus* Experience

These forecasts of immediate profits rebutted experienced consensus that practically all new gas utilities, private or municipal, may not expect to break even for the first two or three years.

Nevertheless, in assurance of the Moses Lake system's solidarity, the bond prospectus prepared by the financial consultants stated: "The annual average debt service is covered 3.18 times."

But before 1960 was half over, Moses Lake officials knew that the rose-colored claims were a myth. Less than one-fourth of the predicted customers had been acquired. Much of the $711,000 system was lying idle. Gross sales were only slightly in excess of its annual debt service, even before allowance for operating expenses. Not only had the city failed to realize the anticipated profits, but it was faced with its first $33,000 semiannual interest payment to be met out of earnings that did not exist.

In the light of these problems, city officials and bondholders agreed that the municipal gas utility should be offered for sale to a private operator.

To the inquiring analyst searching for reasons for this municipal debacle, two major points suggest themselves:

1. The customer acquisition and con-

sumption figures on which the financial and engineering consultants erected their claim of economic feasibility were unrealistic and unattainable. Yet without these high figures, the revenue bonds were not marketable and the municipal system could not have been financed as it was.

2. The city obtained only $711,000 of distribution system to produce a net return on a $1.2 million investment, a disproportionate ratio of productive plant to total debt. But even then, the system as constructed was too large for the volume of business that might reasonably be expected in the foreseeable future.

An important consideration here is the soundness of the promoters' customer estimates. In this instance, their formula predicted 30 per cent saturation of the city the first year, 40 per cent the second, 45 per cent the third, and 70 per cent the tenth year. This is at distinct variance with the experience of private gas utilities in the same state which generally estimate that a newly piped city will show 20 per cent customer saturation along its lines the first year, 30 per cent the third year, and rarely more than 55 per cent in the ninth year. Estimates of customer consumption also vary widely.

Realistic Statistics Prove Value

THIS disparity in estimates can become a costly error. If the customers are not obtained at the accelerated rate the promoters estimate, the municipal system can be in almost immediate difficulty through overestimation of its revenues. This is all the more serious when a large portion of the plant, on which interest is being paid and maintenance and depreciation costs are accruing, is lying idle or only partially used.

Experience has proved that the lower estimates of both customers and consumption used by the private utilities are more realistic. Thus a privately owned company that is economically feasible based on the more conservative estimates is able to weather the first two or three years of marginal operation, and can finance sound expansion of its system as customer growth warrants.

The overestimation of customers was

"Strike One" against Moses Lake's municipal gas department.

The city's difficulty was compounded by the fact that the gas manager hired by the engineering consultants had no effective plan for signing up new customers. It is probable that the bare 400 consumers could have been augmented if such a program had been in effect. But it was not. The original estimate of domestic gas usage was based solely on a house count. No customer sign-up program was undertaken until shortly before gas was turned into the city mains. And then, 850 persons said they "might" convert to natural gas "some time" in the future. Instead of waging an active sales campaign, the gas department waited for customers who never came.

THE necessity for a co-ordinated sales program to promote gas usage is usually avoided or shrugged off by promoters in describing the "profits" to be derived from city ownership of gas systems. The need often goes unrecognized by city officials whose utility departments, accustomed to mandatory sewer and water tie-ins, are not geared to competitive activity.

But it is no secret to anyone in the private utility field that gas for space heating, cooking, water heating, refrigeration, air conditioning, and clothes drying must be sold in competition with established fuels and energy sources. In Washington state, 85 per cent of the competition comes from unregulated fuels.

Under these circumstances, a municipal gas utility must undertake the unsavory task of competing with its own citizens and taxpayers who are engaged in the fuel and electric businesses. Extensive gas educational programs must be conducted by trained, experienced staffs in order to attract the necessary customers to its lines.

Moses Lake had 39 miles of distribution mains, but no sales program for filling them up.

Strike Two!

The facts up to this point lead one to the next estimate: That on the basis of realistic customer and consumption figures, the system as designed and constructed was too large for the city, that it was both overbuilt and overcapitalized.

The Local Layout

MOSES LAKE is a rangy little city stretching along the irregular shores of a prairie lake by the same name. As it has grown under the beneficent impetus of Columbia river irrigation waters, homes have sprawled in all directions, out into the suburbs and across the rocky plains.

Its 39 miles of distribution mains were laid not only in the city's central business and built-up residential districts, but were extended into outlying areas where prospective customers were few and far between. It covered almost three-fourths of the town's seven square miles.

A familiar argument by engineers and bondsmen advocating extensive municipal distribution grids is that the city should make gas available to one and all, that it is imprudent to deny it to any who may want it on the basis of their geographical location within the city.

This may appear politically expedient, and it has a certain naïve appeal. But if followed it means that the city and its gas

customers must pay at the outset for uneconomic or prospective future expansion, even while the promoters are collecting larger fees based on the increased cost.

THIS is in sharp contrast with the policies of investor-owned gas companies whose expansion policies call for main extensions as soon as they can be economically justified, but which preclude heavy investments in unused and untimely facilities.

On the basis of its $1.2 million investment, Moses Lake's cost per customer was $3,000 for each of its 400 gas customers. Even if the rosy optimum had been achieved, the investment last year would have amounted to some $700 per consumer, as against $300 to $500 for privately managed gas utilities.

These factors point up a variance in fundamentals: Investor-owned utilities must make their profits from prudent operations; municipal promoters, from construction costs and bond sales.

The umpire called "Strike Three" and Moses Lake fanned out.

When city officials awakened to the fact that their municipal gas system was almost bankrupt, their first move was to discharge the engineering consultant who held the management contract.

Bondholders approached Cascade Natural Gas Corporation to ascertain if the company was interested in purchasing the properties, and, upon affirmation, the city called for a vote to divest itself of the operation.

COMMENTING editorially, Moses Lake's daily newspaper, the *Columbia Basin Herald,* said:

Voters in Moses Lake have no choice, it appears, but to approve a proposal on next Tuesday's general election ballot to sell their municipal gas system. The alternative, to put it bluntly, would be for the system to go broke and jeopardize the sale of any bonds the city might issue in the future.

Making this recommendation is a little like eating crow. This newspaper . . . strongly supported the city's getting into the natural gas business . . .

Two things were wrong with the setup from the start, things that the city was unable to foresee. First, the city council was presented entirely too rosy a picture by its financial and engineering consultants, both of them well-established firms it had every reason to respect. Second, the possibility of the city selling gas to large outside users such as the Utah-Idaho Sugar Co. plant and Larson Air Force Base has become virtually impossible. . . . This additional income had been counted on to support the system.

After three years of operating its own system, the city is in financial hot water. Most of the bond money went to pay for the system, which includes some 1,000 customer service lines from the mains. Only 400 of these lines actually serve customers, with the remaining 600 still not in use. The revenue hasn't been nearly enough to make payments on the bonds. The city already is technically in default, and if nothing is done by spring its gas department can go bankrupt.

Under these conditions, the only out is to sell the system to a private operator.

The People's Verdict

THE vote to sell was overwhelming. The election campaign had some unusual public relations aspects. Cascade President O. Marshall Jones held one conference with the newspaper editor and radio station manager to give them the company's background. From then on, neither Cascade Natural nor the bondholders took any part in the election. Except for the newspaper editorial, every step to promote the sale was done by Moses Lake's city councilmen who made radio addresses and took paid newspaper advertisements to urge a "yes" vote on the proposition.

Cascade Natural's "know-how" began to pay off promptly after the election, as the cumulative experience of its integrated administration, engineering, sales, accounting, and other departments was put to work on Moses Lake's problem.

The city is beginning to realize new tax revenues from an investor-owned utility that also exemplifies the "Good Neighbor" policy in its community relations. As a private utility, Cascade Natural is prepared to join with other civic and business organizations in helping attract new industry to the city.

Moses Lake soon began to realize that experienced private utility management can accomplish what others were unable to do. By aggressive sales promotion, Cascade Natural added 150 new customers in the first forty-five days. It expects to double the total number of customers within a year.

ITS current sales effort has taken a leaf from the nation's telephone companies. In order to activate quickly the 600 idle service lines, a complete heating service, including conversion burner, is being furnished to customers for a nominal annual maintenance fee. Like the phone companies, Cascade retains title to the burners while adding new customers who are not required to make any investment in gas-heating equipment.

Even before the election, Cascade announced that, if it took over, the city's "unrealistically low" domestic rates would have to be increased some 30 per cent to bring Moses Lake's tariff in line with other cities in the area. Even this has not posed any serious obstacle to customer growth.

Cascade Natural has estimated it will take two or three years to put the Moses Lake system on its feet. But, meanwhile, it has obtained a major industrial customer outside the city whose revenues will help cushion the transition period.

Moses Lake's experience with a municipal gas utility has cast a gloomy pall over municipal ownership theorists in the Pacific Northwest, which may be felt in many other parts of the country. It has turned the spotlight of attention on some of the methods by which municipal utilities are put together, and how they may fall apart.

Why Not Start Downtown on Urban Renewal?

Urban renewal has become a leading issue, as well as controversial conversation piece, in the year 1961. At the various levels of government—federal, state, county, and local—blueprints are being drawn and plans are being discussed for reclaiming downtown areas which have become blighted by the cancerous growth of slums and economic deterioration.

By JAMES H. COLLINS*

If only shoppers can be brought back to the big stores, all will be well again! This feeling starts many a sound urban renewal plan. For the public goes to school to learn the ABC's. And utility people have an important part to play in that.

If a resident New Yorker, on a Sunday afternoon, went down to the lower East river water front, he would be visiting one of the town's least-known sights. New Yorkers go there even more rarely than to the Statue of Liberty.

He would find it rather an astonishing place, creating a mood, a nostalgia for a past that he could never have experienced himself, because it echoes an era long before he was born.

The roots of his family tree are probably there. Long before Castle Garden became the gateway to America, his grandsires landed there from sailing ships, moored with their bowsprits hanging over Water street. Martin Chuzzlewit and Mark Tapley debarked here into Dickens' tobacco-chewing America.

The region still smells of cordage, and tar, and fish, and roasting coffee, and spices. And leather—for 300 years this was the tanning center. It is still referred to as the "Swamp."

More than half its buildings are said to be more than one hundred years old, and among them can be found shops of kinds that have disappeared elsewhere. With a little imagination, that of Sol Gills, with Captain Cuttle puzzling over the outmoded navigation instruments that even the little midshipman cannot lure in customers to buy.

*Professional writer, resident in Washington, D. C. For additional note, see "Pages with the Editors."

This is New York's oldest downtown. It is like the "city" in London, thronged by day, deserted by night. About 4,000 residents are estimated to live in the 564 acres below the Brooklyn bridge, along the river, and around the Battery. Somewhere back in the 1660's it was put to sleep, like Rip Van Winkle, and has slept ever since, awaiting its fairy prince.

A Utility Man Had the Idea

IF our imaginary visitor happened to be a utility fellow, and his job forecasting future load, he would find here some indicators pointing to new customers the next five or ten years.

For this is one of the many downtowns to which merchants and civic authorities are trying to bring back people who have flown to the suburbs. There are plans afoot for apartments, business buildings, more elbowroom for the financial district—one particularly roomy plot in the shadow of the bridge itself, long shut up in storage warehouses, is earmarked for apartments.

Who is going to live in them? Some of the people who fled too far into the suburbs. Their children have grown up and gone away, they are tired of commuting and driving, are ready for apartment living, have the wherewithal, and this neighborhood can put them within walking distance of their offices. There will be other tenants who have never lived in New York at all, but who are being brought here by their companies.

This is an entirely new kind of activity for the utility forecaster to follow, for it means new load of a kind that is just beginning to loom up in other downtowns.

IT was a utility man who first saw the advantages of living here, the late Henry Doherty, of Cities Service. He was impressed by the quiet of the financial district nights and week ends, and had an apartment fitted up in a Wall Street skyscraper.

The penthouse was still to become a symbol of status.

Mr. Doherty was a man who liked to challenge the conventional. Once, when the town fathers raised local rates in a city where his company operated the streetcars, he ran them all out of town on a Sunday afternoon, in protest. Monday morning, people walked to work.

He contrived a push-button bedroom on the roof of his apartment, so that when he woke its doors opened automatically, and his bed rolled out under the sky, with him in it. There was nobody higher up to overlook him. He insisted that the downtown air was purer and more invigorating, and wondered that others did not come to live within walking distance of their offices. His own office was just downstairs.

However, Mr. Doherty was ahead of his time. He was not the fairy prince to wake this beauty. It would take more than a kiss. It would take a Robert Moses.

The Operative Word—Downtown

BACK in the Middle Ages, after philosophers had painted themselves into a polemic corner, they sat down and framed a useful axiom: "All generalizations are false, including this one."

There appears to be no generalization that brings in all the factors in the problem of our torn-apart postwar communi-

ties, or to point a way to make them as livable as they once were.

But there is a word that applies to most of them, from the largest metropolis to the average town. The word is "downtown." Once, the community had a center, where people shopped, and rode streetcars to work, or even walked. Up to the brink of war, when some strange centrifugal force began pulling the town apart, and putting distance between them, and between homes and livelihood.

Downtown lost its shoppers, the neighborhoods where they had lived lost tenants and home owners, nice old neighborhoods where they had lived deteriorated, taxpayers were replaced by tax eaters, more city revenue was needed for police, fire protection, and municipal services.

In this situation there naturally arises the feeling that if people could be brought back downtown, in some way, even to shop, the civic Humpty Dumpty might be put back on his wall again.

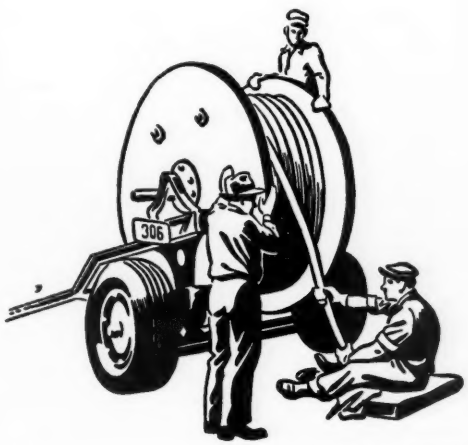
Recently, this feeling crystallized in the "Toledo plan," which attracted national attention, and was tried elsewhere. And a very good plan it is, for a beginning, to be recommended to public relations people, for what it can teach. Utility management's contribution toward financing it would not be money down the drain, but a paying investment in future load. The investment need not be money, but co-operation.

TOLEDO (350,000) is no metropolis. Its flight to the suburbs can hardly have been very far. Downtown merchants figured that if a downtown "mall" could be shut off from traffic, landscaped with shrubbery and flowers, beautified with statues from the art museum, fitted with playgrounds for the kids, benches for elders, made attractive by merchandise shows and displays, shoppers would be able to relax, shop on foot.

This simple plan was carried out for $20,000, of which merchants contributed $5,000. The mall was opened on a summer day, to run six weeks, the public was delighted, 40,000 visitors came down on one early week end; a major attraction was the penguin pool, with five penguins from the city zoo.

Arrangements were made for periodic checking of retail trade, to see what results were brought. Various stores reported various results; a theater proprietor reported larger audiences, thought the mall ought to be made permanent. But a hot spell in midsummer kept shoppers home, as it would have done mall or no mall.

DOWNTOWN everywhere is more than a shopping center, there is office business, banking, and other activities that



do not benefit from such a plan. There was complaint from business people who were shut out of their usual traffic, and from property owners whose tenants wanted to know how long it was going to last. As fall came on, the public hated to see the thing go, and merchants felt that it might still increase retail trade, so it was continued week by week, with some talk of holding it together over the Christmas shopping season.

When the cost of building a permanent mall was figured at upwards of $100,000, which the city would have to finance, there was taxpayer opposition. This would amount to a city subsidy for special interests. From the utility standpoint, a permanent mall would probably not build load to the same extent as other kinds of urban renewal.

Finally, Old Man Winter rang down the curtain.

Baltimore's Penguin Pool

IN the mid-1950's, Baltimore downtown merchants found that for several years their sales volume had been slipping away to the suburbs, where large modern shopping centers, with acres of parking space, were thriving. A committee was appointed to look into the situation, find out what might be done, and when it reported that other downtown business was slipping, the committee was enlarged, became a commission that retained experts, and, in a matter of months, framed a downtown "penguin pool" that would be permanent, pay its way, and benefit all interests.

The Charles Center project offers angles worth studying in other communities. First, it was planned for private enterprise, by business leaders. The hat was not passed around for contributions, and no city money was asked for, though city authorities co-operated in the planning. Nor was any consideration given to federal aid, an important point in such planning. Uncle Sam's money involves certain conditions not always easily met. Local government and politics are drawn in, and anyway there is a general distrust of federal aid, to be weighed in planning. All the financing and running expenses were to be met by revenue from downtown property improvements. And it was planned with such salesmanship that the public approved it as soon as it was explained. It was understood and supported in a matter of weeks. Baltimore maintains that some kind of record was set that way. Many different interests were involved, many sleeping dogs that might have been wakened. An ideal sale—the prospects wanted it as soon as they saw it. Baltimore insists that it was planned that way.

THIS penguin pool, Charles Center, left only five buildings standing on a 22-acre site—three office structures, a hotel, and a garage. All but three streets were closed in nine blocks. Revenue-producing property planned, included three large office buildings, an 800-room hotel, city and state government offices, a civic center, a television center, an auditorium and arena, underground garaging for 4,000 cars. The area flanks the retail stores on one side, the financial district on the other; will have parks, landscaping, pedestrian environment.

The price ticket on this project was upward of $127 million, of which pri-

vate business shouldered $80 million, and voters passed a $35 million bond issue to get going. Baltimore has a master plan for improvements that will cost $470 million, for which popular support is assured.

How to Get Him Out of His Car?

TODAY, there are hundreds of urban renewal projects afoot in the United States, in all stages from the town merchants' efforts to get the shoppers back, to schemes for the largest cities. On some of them tens of millions of dollars are already being spent, and more millions are earmarked for the future. If $100 million were written down as the probable cost of a sound plan, it would undoubtedly be a safe average.

At the moment, there seems to be more surveying, blueprinting, and promising than execution, but it is needed.

For example, there is the tough problem of mass transportation. How to get the individual motorist out of his car, and up on a monorail, or down in a subway. It is easy to name cities where mass transportation plans have been piled on one another for a decade or two, while the traffic jams intensify.

"What a waste!" said Nikita Khrushchev, caught in one of our full-scale five o'clock traffic jams. The party line promises every Russian a car, and a *dacha,* like a capitalistic American. It will be worth hearing what is said when Ivan discovers that a half-day of driving has been added to his week's work.

EVERY city, town, and village has its own rehabilitation problem according to population, its trade, its location with reference to competitive shopping facilities. Toledo is 55 miles from Detroit, 110 miles from Cleveland. Shoppers will drive that far to make an important purchase, for fashion, to see a show, attend a game. Baltimore is 40 miles from Washington, less than 100 miles from Philadelphia, each with its own shopping and cultural attractions, and within air distance of New York, the greatest attraction.

On the other hand, Baltimore draws shoppers and audiences from a wide range of well-heeled towns beyond its suburbs, and that has to be figured in for rehabilitation plans.

Always the Femme!

DOWNTOWN blight is being met in many different ways that will repay study by utility people.

In Atlanta, downtown merchants were losing trade to growing suburbs. What to do—draw back the shoppers by the various expedients that are being tried elsewhere—a Toledo plan? Or follow out with branches of the big central stores? The merchants appointed a committee, and upon its findings followed a plan that adopted a program based on sound merchandising principles.

Shoppers are women, credited with doing 85 per cent of the family buying, responsible for keeping the family budget on an even keel. They feel this responsibility, expect praise or blame for results. Not only from the family, but from other women, a greater audience. Listen to their discussions of values and prices!

The department store was developed for the shopping woman with understanding of her problems—and of women! It brought together a wider range of merchandise than was to be found in dry goods and other special stores—the birth of "one-stop," still the cornerstone of the supermarket and motorized shopping.

A woman wants to be able to change her mind about a purchase, so the return privilege and other expensive features of department store operation originated.

A woman wants to see what is in other stores before she makes a buying decision, so big stores found that at least three made a successful downtown retail center. To check on their competitors' prices and values, find out what the comparative shopper would find when she looked around, the big stores shopped one another.

ATLANTA had two big downtown stores, Rich's and Davison's. Richard H. Rich had foreseen that eventually it would be necessary to move out where the shoppers had gone, but was resolved to stay downtown as long as possible, not desert. The other store agreed upon a policy that would hold downtown trade until moving became necessary, when they would move together.

So, merchandise lines were widened, departments modernized, downtown parking space increased—it is said that Rich's has more parking space than any other store of its kind in the country.

When the suburban move was made, the same basic principles governed. Seven miles out was a center, Lenox Square, that had a population of 200,000 people to draw upon, the only one of that size and character in greater Atlanta, within a dozen miles. Both big stores established branches, adding department store advantages to supermarket facilities, and specialty stores and chain stores added to the attractions. One important angle in the planning was to bring in popular price shops, to reassure shoppers who might otherwise regard the center as too "plushy."

In toto, the downtown problem was handled by making a new farther out downtown.

"Who's Been Minding the Store?"

DOWNTOWN is where most rehabilitation projects start, because that is where deterioration is most plainly seen. And when citizens turn their attention to the problem, there is likely to be a battle.

And a very good thing, too. Battle is conflict. Conflict makes news. There will be an eager press, and continual reader interest. All elements of the populace are drawn in, taxpayers large and small, working folks and their spokesmen, private and public business, cultural organizations with sentimental interests, each fighting for its own hand, all going to school to study the ABC's of community well-being.

What has been happening to our town? Who is to blame for letting it slip this way? What needs to be done? Which of the various projects proposed for its restoration of livability, is the one to vote for? What is it going to cost? Who is to pay—and with what kind of money?

Lots of heat is generated, and a little plain white light, not tinted with bias, is helpful. Utility people can throw some of the needed light, because they occupy a neutral position. They watch change and growth, and are responsible for having the necessary facilities five, ten, or more years hence. They watch which way the cat is going to jump, and can generally give information that helps people see the picture whole. See it as a big question mark. Realize that it is probably the unexpected that will happen.

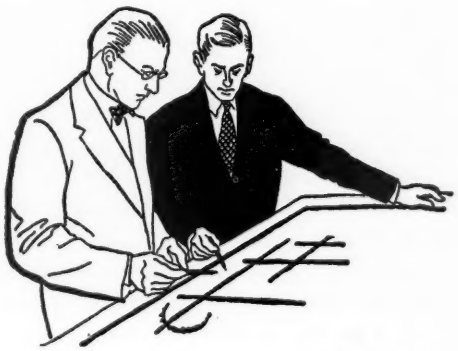
OUR 1958 lag in prosperity woke many a community to the fact that it had been going to seed, and when piecemeal projects were proposed, for bringing shoppers back downtown, and for other developments in the central district, it was realized that there was no general plan. Who had been looking ahead? Who had been minding the store?

Often, there had been a city planning commission, composed of leading citizens, but meagerly financed, unable to engage professional consultants, pressured for zoning concessions, so a broad plan is lost sight of. Politics enter into many rehabilitation situations, and have to be considered. The old question arises of government by a mayor or a city manager. The political complexion may be such that the town cannot qualify for federal housing aid. Citizens have to be informed, and it may happen that an all-around restoration plan will lead to a political clean-up.

More Than One Face to Be Lifted

BRIEFLY, there are as many downtowns as there are American communities, each with its own problems, and sleeping dogs—and unsuspected assets.

Downtown may be rehabilitated by merchants as a shopping center, with the



discovery that it has become inaccessible, through narrow streets and traffic congestion.

The city may have a future as an office center for corporations of various kinds, and private business proposes new skyscrapers to house them. Corporations will take whole floors, or build their own skyscrapers, and above and below and all around will be housed the attorneys and specialists they need. Office population will be garaged in basements and underground. This type of downtown development is considered possible in only a few of our largest cities, say town planners, notably New York and Los Angeles. It is attractive to voters, because private business will carry it out with private capital, supplemented with city bond issues. The improvements will pay their way, but private business may plan with tax freezes in view—so much discount on taxes over a given period. And here, the voters, who will approve a bond issue to help get things going, may balk at tax freezing as a subsidy to special interests.

AGAIN, it is found, in overall planning, that downtown has cultural, entertainment, and educational possibilities.

Big suburban shopping centers, with department store facilities as well as supermarkets, are ideally suited to motor shoppers, gathering up the week's groceries, at one stop, under one roof, with no parking problem—it is futile to try competition with facilities tailored to the postwar age.

But when suburbanites want to see a live play, hear a symphony concert, attend a lecture, or see a big game, downtown is the place. These are different things, and more and more important with increasing leisure. They are attractions for visitors, too, along with central hotels, eating places, and merchandise characteristics of the town.

Studied for an allover rehabilitation plan, the town is likely to reveal hidden assets, such as neighborhoods abandoned by those who moved to the suburbs, now deteriorating in property value, tax revenue, slums. These are assets that may finance rehabilitation.

Twins from the Cradle—Not Identical

UP at the headwaters of the life-giving Mississippi there are the twin cities of Minneapolis and St. Paul. Identical twins in most respects, but from their village days glaring at each other, as rivals, for what reason it is hard for outsiders to figure.

Industrially they are alike, and so diversified as to be immune from the problems of many other communities. Meat-and-potato farm centers, milling flour, packing pork and beef, with iron ore and other minerals, 11,000 lakes for fishing, camping, hunting, a levelheaded Scandinavian population.

What could upset such towns?

Well, in the early 1950's, St. Paul, the lesser town (350,000 to Minneapolis' 552,000), but the state capital, razed acres of slums to reveal the state capitol in a park setting. About the same time, the largest Minneapolis downtown store announced plans for moving to a $20 million suburban shopping center.

Minneapolis businessmen and city officials were aroused to rehabilitation, discovered that the city had no plan, a $65,000 planning commission, a large acreage

of slums, and a citizenry awake to the enterprise of its supposed rival.

MINNEAPOLIS tightened its city government, organized its civic leaders, appealed to its electorate, and put millions of dollars into a complex of projects. More millions are earmarked for the future. A good deal of the money is revenue-producing private capital, much from bond issues, some from sales of cleared slums, there is federal money—any kind of a buck that can be put to work to keep up with the Joneses in St. Paul.

A representative project is Gateway Park, on the edge of the shopping and financial districts, for which 68 acres of skid-row neighborhood were cleared. It has public and private buildings, housing projects of various types, areas earmarked for light industry—it is half as large again as New York's Lincoln Center. There is a collaborating commission that works with St. Paul on planning, for they are both at the center of a wonderful playground region, and each alert to the tourist dollar.

In Minneapolis, copy writers discovered a town planner of long ago. In the days when there was hardly 5,000 difference in population between the Minnesota twins, Theodore Wirth saw possibilities in some lakes lying within Minneapolis city limits, and saved them for a wonderful park system.

Such forgotten civic grandsires can be found in any town with a little background, and utility copy writers can utilize the sentimental interest in them. Los Angeles, for example, with its great Griffith Park, and Griffith planetarium, probably associated with the "Birth of a Nation." Actually it was another Griffith who donated the land for it.

There Is a Word for It

OF course, the number of suburbanites who move into apartments below the Brooklyn bridge, and rehabilitated residence areas elsewhere, is only a trickle compared with the postwar horde that fled to the suburbs. But they are a new trend to be kept track of in utility forecasting. They mean future load, and better uses of land.

Real estate operators in numerous cities already have begun transforming old residences into upper-bracket apartments. Spacious central estates that once had iron deer on several acres of lawn, are being subdivided for residences. The present demand is growing, and the future for such operations is considered bright.

The returnees to central living are often elders whose children have grown up, married, gone away. They are ready to go back to an apartment. Again, the quiet that they found in suburbs has disappeared. New cities have sprung up around them. An executive need not be old to question the common sense of driving 20 miles to his office, another 25 to 50 to help dedicate a new substation, and then 20 miles more to dinner. Three or four hours at his desk to tackle an eight-hour pile of work . . . he discovers that he no longer has what it takes.

So, for utility people, and town planners, this is a new trend to watch.

Basically, it is a search for livability.

A Forward Look at Farm Electrification

A great future lies in store for farm electrification, notwithstanding various changes which are rapidly taking place in American agriculture. Although the number of farms and farmers is declining, those remaining in operation will be larger units with larger power demands featuring various specialized power needs.

By VIRGIL MARVIN*

SURPLUSES, subsidies, supports, and government programs. Everyone who reads is familiar with these issues. Therefore, it is understandable that some people would reach the conclusion that American agriculture is a decadent industry. This just "ain't" so!

Envy of the World

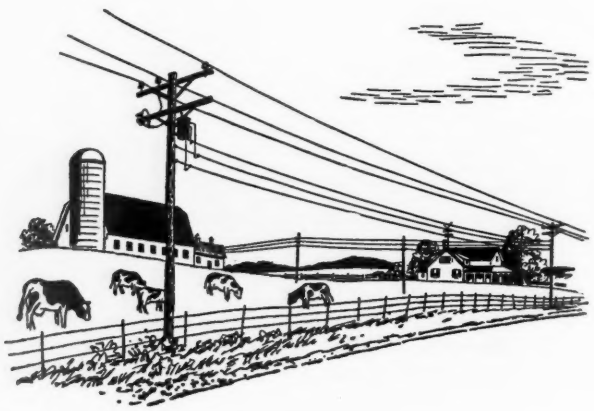
ONE of the major problems that has plagued the world from the birth of man has been sufficient food. Many nations throughout the world are still struggling with this problem. Here in the United States, farmers, working together with research centers, American industry, and government, have developed an agricultural production industry that is a technological wonder.

While millions of people throughout the world are going to bed with empty "bellies," here, in the United States, we are trying to learn to live with too much food. Ironical isn't it?

Power in Farming

HOW has the American farmer accomplished this tremendous production

*Rural sales manager, The Toledo Edison Company, Toledo, Ohio. For additional personal note, see "Pages with the Editors."



job? The answer is simple: through the technological revolution that has occurred in all phases of agriculture since World War II. A major segment of this revolution has been the use of power machinery; tractor power for field operations and electric power for the farmstead. The successful farmer is applying the same machine techniques to his business that has made American industrial production the greatest in the world.

Agriculture and Industry

OVERLOOKED by many, and lost in a labyrinth of words on agriculture, is the industrial demand created by the farmer. You may or may not be directly supplying goods and services for this market. If you are not directly supplying goods and services for the farm market, chances are good that you are indirectly supplying some goods and services for this market. The following figures provide some relative indication of the industrial demand created by agriculture. Each year farmers are consuming:

+ 285 million pounds of rubber.
+ 17½ billion gallons of crude petroleum—more than is used by any other industry.
+ 6½ million tons of finished steel—enough for over four million passenger cars.
+ 22 billion kilowatt-hours of electricity.

There are, of course, other figures that could be used to indicate the importance of the farm market to industry.

Fewer Farms but Larger

IT is true that there are fewer farms today than there were ten years ago or even five years ago. The Bureau of Census figures clearly indicate that. The Department of Agriculture reported 4.8 million farms in 1954. Present estimates indicate about four million farms in the United States. While the number of farms has declined, the millions of family-type commercial farms have increased in size. Farmers who quit farming, for one reason or another, either sold their land or leased it to other farmers. No doubt, this normal attrition will continue in the future.

Capital Requirements

OF greater significance than the decline in the number of farms is the big need for capital on the full-time family, commercial farm. This is best exemplified by a report from Purdue University which shows 273 family commercial farms in central Indiana with an average capital investment per farm of $95,000. The average size was 280 acres. The report also shows an average investment per worker of $55,000. Some of the farms had an investment per worker of $75,000 to $100,000. Figures reported by industry indicate approximately $20,000 investment per worker.

Farming Still a Family Enterprise

FROM time to time, we hear that large corporations are going to take over the farms. Maybe so—but, present statistics show that over 90 per cent of our present farms are family-operated units.

One of the most significant changes occurring is the trend toward specialization in the family unit. Farmers that have practiced diversification with a few dairy cows, chickens, swine, etc., are now starting to concentrate on one major enterprise. The advantages of diversification are no longer economically justi-

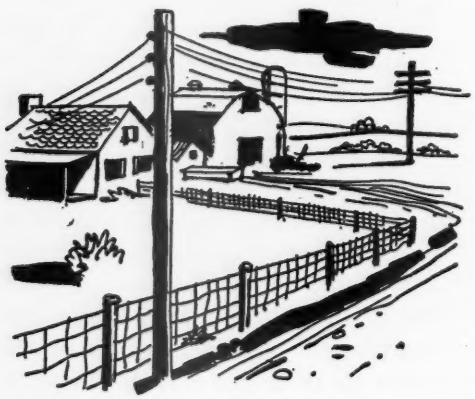
fiable with modern production equipment and methods.

The man who had both dairy and poultry operations and goes out of the dairy business expands his poultry operation. Conversely, the farmer who gives up poultry expands his dairy business. From the standpoint of industry, this is a healthy growth condition.

Meaning to the Electric Company

WHAT does all this mean to the electric utility? To the utilities serving agricultural areas, it means added revenue. The large investment in rural lines, substations, right of way, etc., has been completed. Having service available is only half of the problem. The big job is creating the demand for full utilization of electric power.

Increased use of electricity by the farm customer will not increase costs in a direct ratio. Engineering studies have been made that show when load densities are increased, costs per kilovolt amperes for the added investment in transmission and distribution are reduced. A number of other expenses will not be affected by greater use. For example, it costs no more to read the meter and bill a minimum bill customer than one using thousands of kilowatt-hours. At the same time it is well to keep in mind that new load on the system peak can react adversely by reducing system load factor.



Load Characteristics

IF there were such a thing as a "typical farm" then perhaps we could have a typical load curve. Unfortunately, there is no such thing as a "typical farm."

The dairy farm in New York is not like the irrigated ranch in Arizona, which is not like the poultry farm in Indiana, which in turn resembles very little a beef cattle farm in northwestern Ohio.

Specifically, load from Toledo Edison rural customers is highly desirable as our system peak characteristics are predominately industrial with a late morning peak usually occurring from 10 A.M. to 11 A.M. and an early evening peak usually occurring from 6 P.M to 7 P.M. Recent studies made on five rural feeder lines showed the following load characteristics:

(1) A summer daily load factor of 65 per cent.

(2) A winter daily load factor of 71 per cent.

(3) A summer and winter morning peak occurring from 8 A.M. to 9 A.M.

(4) A summer and winter night peak occurring from 9 P.M. to 10 P.M.

Results of the study indicate two major load characteristics that at present are highly desirable with reference to our system load characteristics:

(1) Morning and night peaks oc-

curring before and after system peaks, respectively.

(2) Exceptionally good summer and winter daily load factors.

In general most of the rural load is good, with some types of farming operations being more desirable than others. In our agricultural area, the most desirable load is the dairy farm, and the poultry farm. Both combine high annual revenue with high load factors.

Rates

THE electric supplier is in keen competition with other suppliers of energy for the rural market. If this were not so, the use of electric energy by the rural customer would be many times greater than it is.

One measure of our ability to compete with other forms of energy is the rate we charge for our product. With farms becoming larger and more automated, the cost of our service is important.

The promulgation of rates is a highly skilled profession and is out of this writer's field of activity. However, from a rural sales promotion standpoint, the rate should be fairly simple, easily understood, and be designed to encourage greater use of electricity.

Rate schedules in themselves do not mean much. How the farm customer feels about his rate is the important thing. If he has some understanding of it and feels that it is fair, he will be more inclined to make greater use of electricity in his business.

The Toledo Edison Company uses a simple, block, kilowatt-hour type of rate for farm and rural customers. Our customers have "grown up" with this rate. They understand it and feel that it is fair.

When farm electrical requirements exceed the practicability of single-phase service—usually caused by one or more large motors—three-phase service is supplied. For this service a demand charge type of rate is used. When this load condition occurs, the farmer is not so adverse to accepting a demand rate. He realizes a change in service is necessary to adequately supply his needs and, if properly explained, he will have some understanding of why he is not only paying for service used but also for availability of service.

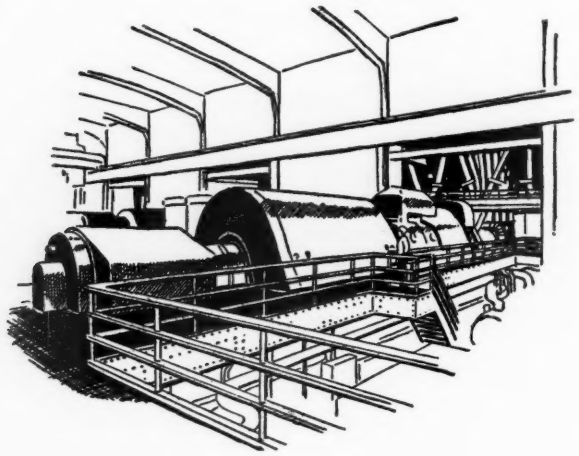
Selling the Farmer

THE farm customer is a growing market for electricity but, as is true with everything else, you have to sell it! "How do you promote it?" "What makes a good farm sales program?" There is no one answer. However, there are two highly important factors necessary for a sound program. They are (1) a management recognizing the need for a consistent sales program and (2) a highly trained staff of farm power engineers for effective sales engineering work.

With the above two factors as the foundation, you obtain your objectives by various methods:

By direct customer calls. The rural sales engineer not only has to sell the customer on using electricity, but, almost as important, must help plan and engineer the installation.

By educational programs. Co-operate with and assist county agricultural agencies in planning and conducting area meetings. In this category would



be the University Extension Service, the Vocational Agricultural High schools, and the U. S. Soil Conservation Service.

By conducting meetings with farm organizations such as Grange, Farm Bureau councils, and Parent-teacher associations.

By tours, demonstrations, displays, and open houses.

By publicity in the press. Alert the press to newsworthy stories and help them obtain the material.

By advertising in county newspapers.

By direct mail advertising to selected customers.

By radio and TV programs. Area stations devoting time to agricultural programs welcome informative, well-prepared material.

THE above functions add up to a planned marketing mixture designed to sell electricity to your farm customers.

Many of the private electric utilities have farm power departments that are doing an excellent selling job. At the same time, they are providing a planning and engineering service to the farmer which he recognizes and appreciates.

State and National Programs

IN a number of states the private companies, the REA co-operatives, and the state college of agriculture have formed state electrification councils. The purpose of such organizations is to further research and educational programs on the use of electricity in agriculture. Also, private companies in some states are jointly sponsoring advertising programs in their state farm magazine. In Ohio, the private companies have been carrying on an advertising program in the *Ohio Farmer Magazine* for a number of years.

Participating companies of the Edison Electric Institute have joined to take part in a Farm Better Electrically program. Through this program, the use of electricity on the farm is to be encouraged

by a series of advertisements in major national farm publications.

Benefits to Company

A LOGICAL question at this point would be "What does an active rural program do for the company?" There are, of course, a number of benefits to the company. Specifically, there are three major things that it does:

(1) Increases rural revenue.

(2) Builds customer confidence and good relations with the company.

(3) Improves total economy of the area.

The first two benefits need no explanation. While the third one—improves total area economy—is a broad concept of evaluating the effectiveness of a rural sales program.

This concept of a rural sales program was developed by William R. Poole, vice president sales, The Toledo Edison Company, in a paper entitled "A Rural Sales Program Which Meets the Challenge," presented at the 1960 Edison Electric Institute sales meeting in Chicago.

In his paper, Mr. Poole cited three examples of the increased investment required in buildings and equipment when livestock and poultry farmers enlarge their operating units by making full use of electricity:

(1) A beef cattle feeder increased his capacity from 100 steers to 400 steers. This required an additional investment of over $137,000.

(2) A dairy farmer raised his capacity from 20 to 45 cows. Additional investment over $44,000.

(3) A poultry farmer that built a windowless 20,000 bird "egg factory." Investment $130,000.

CONTINUING from Mr. Poole's paper and I quote:

> With these examples and many more like them, a tremendous amount of money is spent in the local market; from banker to the farmer, the builder-supplier, the equipment salesman, the insurance man, and many others share in this activity. Incidentally, we are sharing a bit in this too as we have experienced an annual kilowatthour increase of 12 per cent in the last ten years from our rural accounts.
>
> With the rural sales department performing such a key rôle in this, it would be unrealistic to evaluate their effectiveness on the prosperity of the farmer alone, but they must receive their full share of credit for the growth and prosperity they helped generate.

The Future

THE future of electricity in agricultural production is only limited by the imagination of the scientist and the farmer. With some information available from isolated work being done at present —and some imagination—it is possible to suggest some applications which will be put to use in the not too distant future.

Materials Handling. One of the major problems in operating a livestock and poultry farm is that of materials handling. It is necessary on livestock and poultry farms to handle tons of material in and around the buildings annually. Applications of electric-powered materials handling equipment to livestock and

poultry farms has shown progress the last five years. However, a large percentage are still handling tons of material by hand methods. It usually takes from ten to twenty years for new agricultural developments to be widely accepted after they have proven beneficial. Therefore, we can expect further developments of materials handling methods and equipment to approach full automation. This will be made possible by full use of electronic program-control equipment.

Environment Control. Research now being conducted by agricultural engineers, working with the animal scientists, has shown that when optimum temperature and humidity are maintained, farm animals produce more meat, milk, and eggs with less feed per unit. A whole new field for the use of electricity in agriculture is now unfolding, with farm structures being designed for confinement raising of livestock under controlled environment conditions. Therefore, in the future, we can look forward to increased use of air conditioning for complete control of environment in farm buildings.

Conclusion

AGRICULTURE in the United States is undergoing a rapid change. The number of farms and farmers is declining. Those remaining are operating larger units with a very definite trend toward specialization. Since World War II mobile power has mechanized practically all field operations. While many factors will be involved in agricultural production, during the next ten years, one of the most significant from the electric utilities' standpoint will be that of farmstead engineering. This will involve the adaptation of new techniques—now in the research stage—such as completely automatic materials handling systems, and environmental control for livestock and poultry. All of this and more will further increase the use of electricity in agriculture.

". . . if the Russian leader is really interested in learning about U. S. farm production, he'd do better to spend his time elsewhere than in agricultural research laboratories and on the farms. None of those is the place that has arranged food production know-how so that Uncle Sam is running out of bins and warehouses to store the stuff.

"The place for Mr. Khrushchev to go is straight to Congress. It's there that he'll learn how to produce more corn and wheat and cotton and soybeans and tobacco and oats and barley and rye and flaxseed and dairy products and peas that Russia and all her satellites could use. All he would have to do would be to see that this government foots the bill for overproduction. . . . The system here has cost the taxpayers and the government more than $5.8 billion in outright losses in just six years.

"We doubt very much that Mr. Khrushchev would be interested in any production know-how that would end up costing the Russian government anything like $1 billion a year. He may be the world's leading Communist, but he's too smart a businessman to go that far."

—EDITORIAL STATEMENT,
The Wall Street Journal.

OUT OF THE MAILBAG

PUD's Labor Record Defended

MR. ROBERT PERRY's complaints in your January 19th issue against organized labor's rights and conditions under public ownership in Washington state apparently are based on unreliable information. This is possibly due to the fact that he is not connected with the utility business, but rather, his local union has jurisdiction over inside electrical workers.

All 21 operating public utility districts with electric systems in Washington have labor agreements and in each instance contain a union shop provision. Ours is the first, dating back to 1943. These PUD's have always bargained collectively and have consistently recognized organized labor's important rôle both as representatives of the workers and as an influence for the nurture and protection of our locally owned electric utility enterprises. In fact many of these contracts include office workers and engineers as well as electrical workers.

Mr. Perry's statement that PUD's do not permit true collective bargaining is untrue. Managements of PUD's bargain from the same position as private employers. I personally have participated in over 100 bargaining sessions in the past fourteen years. They have been tough. Over the years there have been several strikes and walkouts against different PUD's—and no legal action was taken against the union.

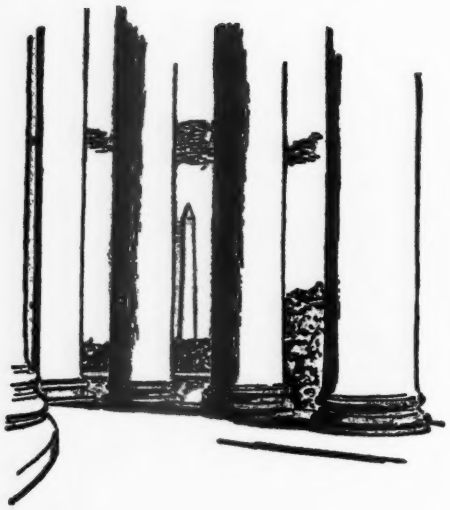
Some PUD's and some private utilities have no-strike provisions in their labor agreements. Our own no-strike clause was inserted in our contract in 1956 at the *request of the union* in a spirit of union statesmanship.

Mr. Perry also errs when he states that private companies negotiate before any of the PUD's. Four PUD contracts expire in December, one expires in January, and nine others expire in February. All three of the private utilities in Washington have contract expiration dates in March. During the current negotiating season, for example, 12 PUD's had held one or more bargaining sessions with the union (beginning in November, 1960) before a single session was held between the union and a private utility. It is common knowledge in this area that early PUD negotiations set the pattern for all utilities including those which are privately owned. He is further wrong when he claims that public agencies *always* pay less than do private companies. Most PUD scales have consistently been equal to or higher than the private companies for years. No private or public utility can keep competent workers unless their pay and working conditions are competitive.

IN Clark county our combined wages and fringe benefits have always been equal to or greater than those of neighboring private companies. At the present time our linemen are paid $3.37 per hour or $7,009 per year, and during 1960 each of them averaged an additional $360 in overtime payments. Our utility led the nation in paid vacation and sick leave for fourteen years. Last year our employees averaged twenty-nine paid days off (vacation plus holidays), plus paid sick leave, which, incidentally, can be accrued to a maximum of twenty-one weeks. In common with most PUD's and private companies, our employees have social security, a pension plan, unemployment and workmen's compensation, and group life insurance.

Mr. Perry does his state a disservice when he argues against low-cost electric power. Without it this state would still be a colonial empire at the mercy of eastern exploiters. It is remarkable that we can have low-cost power out here, and still pay top wages and salaries to our employees.

—V. M. CLEAVELAND,
Manager, Clark County Public Utility District, Vancouver, Washington.



Washington and the Utilities

When Is a Czar a Czar?

PRESIDENT Kennedy, in his press conference on February 8th, tried very conscientiously to clear up a perfectly natural misunderstanding about his plans for co-ordinating the regulatory commissions. There were those who read into the now famous year-end report on this subject by James M. Landis an assumption that the administration was considering some sort of central control officer—call him overseer, czar, or whatever—to hold the reins and ride herd, if necessary, over the full team of regulatory commissioners.

Granted that some form of centralized control is required to keep the team pulling together and not interfering with one another's efforts, the question naturally arose whether it would be possible to avoid some measure of White House interference with the independent activity of the commissions over such a setup. The question is still there. President Kennedy tried to show that the Landis proposals, as he understands them, would preserve both the independent character of the regulatory commissions and the traditional responsibility of Congress over the operation of these agencies.

Just by way of avoiding any error through indirect quotation, here is an excerpt from the text of the transcript of President Kennedy's news conference on February 8th, giving the exact words of both the questioner and the President's reply:

> *Q.* Mr. President, the Congress has spent a good deal of time investigating regulatory agencies and executive interference in them. Now, your assistant, Mr. Landis, has suggested that a White House office be set up to oversee these agencies. Do you feel this might lead to the same kind of Executive interference that the Congress has been investigating?
>
> *A.* Mr. Landis recommended such a White House office in his study. I have asked Mr. Landis to come to the White House, not to fill such an office, of course, which is not established, but merely to work with the White House and with the interested members of Congress who are concerned about improving our regulatory procedures.

He is going to stay some months and do that. I conferred yesterday with Congressman Harris, who has a special responsibility as chairman of the House Committee on Interstate and Foreign Commerce, and we are going to continue to work together to try to speed up the procedures of the regulatory agencies and improve their actions.

Whether we should have such a White House liaison or center is a matter which we are going to consider. The Congress bears special responsibility for these agencies, and, therefore, I think it is probably not likely that major responsibility in this area would be released to the White House, and I am not completely sure it is wise.

In other words, it is the President's view that Congress is not likely to delegate any major authority over such agencies to the executive branch because, constitutionally, they are arms of Congress.

As Mr. Landis stated in his report, substantial progress has been made toward just this reform. Early in the Eisenhower administration a conference was called on administrative procedures. This conference led to a committee headed by Judge E. Barrett Prettyman of the district court of appeals with the job of working up a plan for a permanent conference on administrative procedure. The Prettyman group has formulated proposals for such a permanent conference.

The Prettyman group would maintain a running survey of procedural rules, ethical norms, internal management matters, and other aspects of administrative law. It would propose changes as needed. It would maintain liaison with the Congress. The British already have set up such a governing group in their Council on Tribunals, established under a law of 1958. Dean Landis likened the proposed administrative conference to the Judicial Conference of the United States, which transformed into an organic system the isolated and often excessively individualized federal courts. An administrative conference or assembly of this sort seems to promise as much as any White House czar and, as the President suggested, has the additional merit of political and constitutional feasibility.

But for the hard-boiled skeptics who insist that they are from Missouri, there is the fact that the "Overseer," or whatever he would be called, would be in a position to transmit policy directions to the commissions via the chairmen. The chairmen, in turn, would hold their jobs at the pleasure of the President. In addition, the pending reorganization law would clear the tracks for forthcoming regulatory reorganization plans which would shift around to these chairmen a number of administrative and other duties which are now the responsibility of the commissions.

Perhaps these are all sound changes and long overdue. Perhaps the "Overseer" would use a light rein and confine his controls to modest advisory suggestions. That would be a matter of degree which a future "Overseer" might alter. In short, it is the proof of the pudding which will be awaited before there is any certainty whether the proposed "Overseer" will be a czar, policeman, traffic dispatcher, or just a friendly adviser.

Progress on Reorganization Bill

By a voice vote the Senate passed the administration's bill to give the Presi-

dent broad authority to reorganize the executive branch of the government. The bill is rather broad in scope. It could cover such matters as authority to change around the regulatory agencies and establish a White House Overseer of such agencies, as proposed by advisory reports to the President. The Senators deliberated the bill for fifty minutes before it was approved without objection and then sent along to the House, where it will probably get somewhat closer attention. The bill is regarded as likely to pass, however, because it does not of itself set up or validate any changes at all. Such changes must be drawn up in the form of reorganization plans and then sent to Congress to be considered on their own individual merits.

The reorganization bill, in effect, reverses the respective legislative and veto rôle of the President and Congress. Normally, Congress legislates and the President approves or vetoes. But under the reorganization setup the White House proposal legislates, in effect, and Congress will have to veto within sixty days by a majority of members actually present and voting.

The authority granted the President is wide enough to allow new Cabinet-level departments, such as the proposed Secretary of Transportation or the Department of Urban Affairs. But it is more likely that Kennedy would prefer to set up such important agencies by special legislation. The President could not completely abolish any department or all its functions, nor could he consolidate any two departments or their functions, or give any agency power to do anything which it is not now permitted to do.

COMMITTEE chairmen, jealous of their powers, are eying the measure suspiciously, but have not come out in opposition. There seems little doubt but that the overall bill will be passed and become law.

It will be when the individual plans for reorganization come up in the future that the critics in Congress will be "laying for them."

Senator Magnuson (Democrat, Washington), chairman of the Senate Interstate and Foreign Commerce Committee, wanted to know if the regular Senate committees, such as his, would have something to say about reorganization plans affecting the regulatory agencies as they pass through Congress. Magnuson was assured by Senator McClelland (Democrat, Arkansas), chairman of the Senate Government Operations Committee (which approved the reorganization bill), that the committee would still have an opportunity to pass on reorganization proposals as they are submitted from the White House. This would be done by referring veto resolutions to the proper legislative committee for recommendation to the Senate.

Udall's Press Conference

INTERIOR Secretary Stewart L. Udall has reaffirmed his department's basic position calling for construction of an all-federal backbone transmission grid for the Colorado river storage project, as announced January 17th by former Interior Secretary Seaton. Following a rapid and complete review by his staff, Secretary Udall asked for clarification of several aspects of the plan and ordered further studies to strengthen the basic planning guide lines.

Secretary Udall said it should be made explicit that any interconnection agreements between the federal government and utilities would have to be advantageous to the government and fair to the

utilities involved. In this respect, he asked that bureau recommendations previously accepted be amended to read: "Negotiations will be undertaken by the bureau to determine what mutual benefits might be obtained by interconnections and interchange arrangements between the bureau systems and commercial utilities of the region."

Other points Secretary Udall asked Kenneth Holum, Assistant Secretary for Water and Power, to survey are: (1) a review of Utah transmission line location and delivery points to determine whether preference customers can be better served; (2) interties of Colorado project with the western division, Missouri river basin project, to see if they should be strengthened with a 230-kilovolt line from near Pueblo to the Limon, Colorado, facility.

UDALL said he was only "playing by rules of national politics" when he discussed House Rules Committee votes with western Congressmen. Udall denied any "improper" activity. Republicans had charged he threatened the fate of western water projects to get votes in favor of enlarging the committee. The Secretary told a news conference that the White House knew he discussed the issue with several Congressmen.

Udall denied any contact with Representative Lennon (Democrat, North Carolina) prior to the Rules vote. It had been charged the Secretary might reverse a department decision to locate a saline water conversion plant at Wrightsville Beach, North Carolina, unless Lennon voted for the Rules change. Udall explained that the decision to review the location of the plant was indicated because other sites had advantages challenging those at Wrightsville. Measured on a scale of 1,000, Wrightsville scored 885, he said, but Port Orange, Florida, scored 880, Green Point, Long Island, 815, and Virginia Beach, Virginia, 810. Udall said that the department, under former Secretary Seaton, located a plant at San Diego, "where they (Republicans) had a political problem."

THE Interior Secretary added that the fate of the proposed Fryingpan-Arkansas project would not be affected by the Rules fight vote of Representative Chenoweth (Republican, Colorado). "It is not the policy of this department to engage in little partisan forays," Udall said. Chenoweth, one of the western Republicans called by Udall, in effect threw his support to Speaker Rayburn (Democrat, Texas) in the nip-and-tuck fight by canceling out his "no" vote at the last minute. He allowed himself to be recorded as paired against an absent member who wanted to be recorded in favor of the proposal.

After voting "no" when the roll was called, Chenoweth changed his vote to "present" before the final result was announced.

Secretary Udall later told the press that he foresaw a new and greater rôle for the Bonneville Power Administration as "the very heart of the economy of the Pacific Northwest." Udall said BPA Chief Charles Luce had been told he had wide authority to restore the BPA to its original rôle as a "great planning agency." "I look for a great deal of activity in the Bonneville Power Administration," Udall told a news conference. He said that increasing BPA's authority to enable it to sell bonds for financing increased activity had not yet been considered. However, he said, Luce had been invited to return to Washington with "new ideas" after becoming more familiar with his present post.

Gas Cases Climb in 1960

FPC Chairman Kuykendall stated January 31st that the Federal Power Commission has disposed of three times as many cases as in the preceding year. Even so, the commission ended 1960 with more proposed rate increases by independent natural gas producers on hand than it had twelve months earlier. The commission started the year with 3,065 cases, seeking increases of $154,316,544 on an annual basis. At year's end, there were 3,605 pending cases, totaling $170,566,-037 per year.

During 1960 the commission disposed of some 760 cases, amounting to $16,-497,633. This compares with only 240 cases disposed of in 1959, which amounted to $5,854,733. During 1960 the backlog of natural gas pipeline rate increases was reduced and five fewer cases were pending at the end of the year than had been at the beginning. During 1960 the commission also issued 219 certificates, authorizing interstate pipeline companies to construct 5,784 miles of transmission lines.

Total estimated cost of construction authorized by the commission in 1960 was $787,632,883. At the year's end the FPC had pending 186 applications proposing construction of 5,783 miles of pipeline at an estimated cost of $698,-647,557.

Gas Storage Items

A LIQUID gas storage arrangement, sponsored by 40 gas utility companies in New England, is receiving consideration. In essence, the plan calls for the underground storage of refrigerated methane gas during the low-demand summer months. Such storage is expected to help offset heavy withdrawals during the winter and level out the peaks and valleys of seasonal demands. In order to liquefy methane gas, the temperature must be brought down to the neighborhood of 260 degrees below zero.

The American Gas Association has been conducting studies relating to liquid gas storage. It is understood that AGA expects to erect a pilot storage plant later this year to determine the feasibility of using insulated concrete tanks as storage containers. Previously, expensive aluminum and balsa wood storage tanks have been used.

Last year, the ship *Methane Pioneer,* equipped with the balsa-aluminum tanks, transported natural gas from the United States to England. The New England area does not have depleted gas fields which could be used for storage. A good many utilities and transmission companies feel that the liquefied gas storage scheme may be the answer to the area's chronic fuel price and demand problem.

THE Washington Gas Light Company's underground gas storage bill was introduced for the sixth time in the Maryland general assembly recently. Gas company officials hope an educational campaign last December will succeed in thawing the opposition to the bill, which has stood since 1954. The company wants to store gas in a huge underground natural dome in southern Prince Georges county. The dome is 10 miles long and 1,500 feet underground. Washington Gas Light needs condemnation powers because some landowners do not want gas under them.

Telephone and Telegraph

White House Submits Wage-Hour Amendments

PRESIDENT Kennedy has sent his recommendations for amending the Wage-Hour Act to Congress. Early predictions are that final action on the bill may come before Congress begins its Easter recess. There still is, however, the distinct possibility that Congress may delay sending the bill to the White House until after that date.

The President's proposal recommends that the minimum hourly wage be raised from $1 to $1.25 in three yearly steps. This plan would advance the minimum wage 15 cents this year, five cents in 1962, and the final five-cent increase would come in 1963.

Broader coverage to workers not now included in the statute would extend the law's provisions to some 4.3 million new workers. About 30,000 operators of local telephone switchboards would be included if the President's recommendations are enacted. Newly covered workers, including telephone operators, would be entitled to overtime benefits. Benefits would be available after forty-eight hours of work during the second year of the bill's application. During the third year the bill is in force, a 42-hour week would be called for, and thereafter a 40-hour week would be the general rule for all persons who come under the Wage-Hour Act.

COVERAGE, under the President's proposal, would be extended to the following enterprises: (1) any retail or service establishment with an annual volume of sales exceeding $1 million; (2) laundering, cleaning, and clothes repairing companies with an annual volume of sales of more than $1 million; (3) local transit companies; (4) enterprises with annual volumes of sales exceeding $250,000 or, in the case of construction firms, $350,000; (5) gasoline service stations with an annual volume of $250,000.

Commenting on the bill, the Secretary of Labor noted that the proposal would not affect the present status of hotels, restaurants, and motion picture theaters. It also would not remove the exemption on overtime work for gasoline service firms and certain fishing-processing establishments.

In reality these recommendations represent some back tracking on the part of the administration. The proposed bill, in many respects, greatly resembles the bill presented by former President Eisenhower. The extended coverage provisions in the new bill are not as wide in scope as had been anticipated, and the wage

hike has been extended over a period of three years rather than two, which had been anticipated. All in all, the President's bill is much less liberal than the proposal which he introduced while he was still a member of the Senate. Most Washington observers believe that this is an administration move to make it difficult for conservative members of Congress to fight the legislation.

THE particular point of interest for the telephone industry is the section having to do with the exemption for operators of small telephone switchboards. In President Kennedy's proposal, the new exemption section reads:

> Any switchboard operator employed by an independently owned public telephone exchange which has not more than 750 stations.

In hard facts the minimum wage extension will only change the status of a very limited number of operators. According to some sources, 30,000 to 41,000 operators will be included if the new bill is enacted. However, these figures are reduced considerably when it is understood that the vast majority of these employees, while not now under the law, are receiving at least minimum statutory wages. According to some estimates, there are only about 5,000 employees in companies which have less than 750 stations and these would be the operators taken into the law should President Kennedy's proposal be enacted.

IT will be remembered that legislation to boost the minimum wage died in conference last year when the conferees were unable to agree on a compromise between the House version which called for a 15-cent increase and the Senate proposal which granted a 25-cent boost. The two House committees immediately concerned with the administration's bill would appear to be favorable to the President's proposal. The bill itself (HR 3935) has been dropped by Representative Roosevelt (Democrat, California) and it is expected that hearings will begin in the House in the near future. The House Committee on Education and Labor, the group which will conduct these hearings, is now headed by Representative Powell (Democrat, New York). In addition, the House Rules Committee has been enlarged, assuring that after the Labor Committee reports the bill it will get an airing on the House floor. The Senate will probably enact legislation much as it has been submitted by the White House. The group to watch then is the House.

Opponents of the bill are sure to try to amend sections of the bill, unless, and it has been done before, the proposal is called up under a parliamentary provision which would preclude amendments from the floor. It is hard to visualize both legislative bodies enacting completely identical bills, and chances are that in the end two versions will emerge which will have to be resolved in conference. What may come out of this is hard to say. If the conferees experience great trouble in reaching an agreement, it might be some little time before a bill is sent on to the White House.

IT seems certain that a bill increasing the minimum wage will be enacted into law this year. One of the chief points of President Kennedy's campaign was the need for this legislation and the President recently stated that

> Our nation can ill afford to tolerate the growth of an underprivileged and underpaid class. Substandard wages lead necessarily to substandard living conditions, hardship, and distress.

In view of such statements and the campaign promises, Congress can hardly fail to enact some sort of legislation. We have, however, already seen, in the extended coverage provisions, some hesitancy and the chance still remains that Congress may take an even more cautious view of the entire matter. Certain congressional figures are known to view any increase in the minimum wage as an added factor which will only boost our already inflated economy. Nevertheless, some form of the bill will be enacted and representatives of the telephone industry can be expected to make their views known when the House and Senate commence hearings.

Repeal of Excise Tax

As during every session of Congress, a huge number of bills have been introduced which would repeal the 10 per cent excise tax on telephone service. Up to this time the new administration has not made its views known on this subject, but some action will have to be taken soon since the excise tax legislation will automatically expire on June 30th. President Eisenhower advocated a continuance of this tax and in view of the new administration's statements on the budget, most Washington observers believe that the President will once again ask that the tax be reinstated.

In reference to the new bills on this subject, Representative Sisk (Democrat, California) has introduced an unique proposal which would repeal the excise tax for co-operative telephone companies only. Representative Sisk's proposal (HR 3800) would exempt only small co-operative telephone companies from paying a communications excise tax on what the bill calls the "cost of maintenance." The bill's sponsor believes that, if enacted, his proposal would "save rural telephone companies from being put out of business." Interestingly enough, the proposal does not contain any provision for granting similar relief to telephone subscribers of the Bell system or independents.

Representative Sisk is apparently seeking to distinguish a co-op bill for service from any other kind of monthly bill. In a statement accompanying the introduction of his proposal, he stated:

> As these companies have no income and file no tax statements, they never learned they might be held liable and they have never collected the tax from their members. Today spot checks are being made on these small companies. The Internal Revenue is not initiating only collection of the taxes for the present year. It also is seeking to collect taxes for previous years. It would be necessary for the co-operatives to go out and collect the tax from their members.

It appears from this that the Internal Revenue Service has been investigating some of the co-ops and mutual companies which have been failing to make excise tax returns. It does not seem probable that this bill will be enacted since the House Committee on Ways and Means has repeatedly stated that it does not intend to consider such legislation until a general revision of taxation is undertaken. It can be assumed that the committee will again follow this pattern.

Prospects for an early repeal of the 10 per cent excise tax do not look encouraging. In all probability the administration will advocate another year's extension of the wartime levy, and such a bill will be enacted before the June 30th deadline.

Financial News and Comment

By OWEN ELY

American Electric Power to Include Tax Savings in Equity Ratio

AMERICAN ELECTRIC POWER on January 13th obtained a favorable decision from the Securities and Exchange Commission regarding the balance sheet treatment of savings in income taxes resulting from the use of accelerated depreciation. The decision, contained in Holding Company Act Release No. 14353, also included a decision relating to financing by Kentucky Power Company (an AEP subsidiary).

The SEC some time ago issued a "Statement of Administrative Policy Regarding Balance Sheet Treatment of Credit Equivalent to Reduction in Income Taxes," in which it stated that "any financial statement filed with us would be presumed to be misleading or inaccurate, provided that amounts involved were material, if it designated such accumulated credit as earned surplus (or its equivalent) or in any manner as a part of equity capital, even though such designation was accompanied by words of limitation, such as 'restricted' or 'appropriated,' and even though disclosure was contained in the certificate of the accountant or in footnotes to the statement." This raised some doubts as to whether the item could still be included with the several amounts which (combined) represent "common stock equity," for the special purpose of determining the equity ratio, and correspondingly the long-term debt ratio, in connection with published reports to stockholders, financial services, and others. American Electric Power has understandably been anxious to keep accumulated tax savings as part of the equity portion of total capital, and hence the importance of the decision both to AEP and to other utility companies which use accelerated depreciation and normalize the resulting tax savings.

AMERICAN ELECTRIC POWER had submitted the accompanying table show-

DEPARTMENT INDEX

	Page
American Electric Power to Include Tax Savings in Equity Ratio	322
The Battle for Air-conditioning Markets	324
Table-Electric and Gas Utility Security Offerings in January	324
Another Bell Labs "Breakthrough"	325
Table—Current Yield Yardsticks	325
Chart—Trend of Utility Stock Groups	326
Calendar of Proposed Utility Offerings	327
Public Power Agencies Apprehensive of Tax Burdens	328
Tables—Financial Data on Gas, Telephone, Water, and Transit Stocks	328, 329, 330

ing projections of the estimated accumulated amounts of tax reductions (both those recorded as Restricted Earned Surplus and those recorded as Reserve) for 1961, 1965, and 1970, and the estimated percentage of total capital in those years.

The table indicates that, at the end of 1961, if the tax reductions were not included in the equity portion of capital, the equity ratio would be decreased, and the debt ratio increased, by 8.9 per cent of total capitalization. The company testified that this would result in a substantial increase in the cost of capital and taxes, have an adverse effect on rates, and thus impose a burden on consumers.

The SEC decision stated:

> In our Statement of Administrative Policy, it was indicated in Note 11 thereof that, although we did not intend to consider a company's accumulated tax reduction as a part of common stock equity for analytical purposes, we would nevertheless give consideration to the item as one of a number of relevant factors in appraising the overall financial condition of such company. The division also correctly pointed out that by our Statement of Administrative Policy we did not intend to and of course could not foreclose rating agencies, financial analysts, investors, and others from regarding the amount of accumulated tax reduction in any manner they deem appropriate for their purposes.

As a result of negotiations with the commission, it was finally agreed that American Electric Power in its system consolidated balance sheet could use the following caption (in which the phrase "recorded as earned surplus" is significant):

> Accumulated Amount Invested in the Business Equivalent to Reduction in Federal Income Taxes Resulting from Accelerated Amortization and Liberalized Depreciation, Which Is Recorded as Earned Surplus Restricted ($94,698,293), or as a Reserve ($6,600,874) for Future Federal Income Taxes in Accounts Maintained Pursuant to State Regulatory Requirements.

The state regulatory commissions regard the tax savings item as earned surplus and their orders so provide. While the final resolution by the Federal Power Commission of the accounting problem has not yet been fully developed, the SEC is regarded as having senior jurisdiction in the national field.

Specifically, the commission stated that it would make no adverse findings in respect to American Electric Power's system capitalization ratios, in connection with new financing, so long as the common stock equity is at least 30 per cent of capitalization, mortgage debt not in excess of 60 per cent, and long-term debt (including debentures) limited to 65 per cent. These ratios would be based on the figure for surplus which would exclude the tax savings item referred to above. However, with the com-

At Year-end	*Capitalization, Including Surplus (000's)*	*Accumulated Tax Reduction (000's)* — *Accelerated Amortization*		*Liberalized Depreciation*		*Total*	
		Amount	*%*	*Amount*	*%*	*Amount*	*%*
1961	$1,440,207	$108,241	7.5	$ 20,301	1.4	$128,542	8.9
1965	1,799,546	137,251	7.6	48,923	2.7	186,174	10.3
1970	2,409,204	104,420	4.3	104,612	4.3	209,032	8.6

pany's equity ratio now in the neighborhood of 39 per cent with tax savings included, this requirement would apparently present no practical difficulties with respect to obtaining SEC approval of future system financing.

Donald C. Cook, executive vice president of American Electric Power Service Corporation, in a talk before a group of financial analysts, made the following statement:

> On the basis of our present forecasts it appears that the American Electric Power system should now be able to rely largely upon debt financing to meet its capital requirements for many years to come. Certainly for the next six or seven years, and perhaps for ten years or longer, we should not have to sell any additional shares of common stock whatsoever. This is as it should be, for the system has a large and solid equity.

The Battle for Air-conditioning Markets

THE contest between the electric and gas utilities for the house-heating and air-conditioning market, particularly in the southern part of the country, continues to provide interesting material for discussion. Southern Company is actively promoting electric heating and last year

ELECTRIC AND GAS UTILITY SECURITY OFFERINGS IN JANUARY

Date	Amount (Mill.)	Description	Price To Public	Underwriting Spread	Offering Yield	Aver. Yield For Securities Of Similar Quality	Moody Rating	Success Of Offering
		Bonds and Debentures						
1/11	$13	Pacific Gas Transmission 5¼% (s.f.) Conv. Sub. Debs. 1986 ...	100.00	—	5.50%	—	—	e
1/12	10	Iowa Power & Light 1st 4⅛s 1991	100.40	.68C	4.60	4.48%	Aa	a
1/18	7	Kansas Gas & Electric 1st 4⅛s 1991	101.22	.69C	4.55	4.47	Aa	b
1/18	30	Texas Eastern Transmission 1st (s.f.) 5s 1981*	100.00	1.00N	5.00	4.82	Baa	a
1/25	7	Otter Tail Power 1st (s.f.) 4⅞s 1991	101.19	.99C	4.80	4.45	Baa	d
1/25	12	Texas Power & Light 1st 4⅛s 1991	101.00	.61C	4.44	—	Aa	d
		Preferred Stock						
1/18	15	Texas Eastern Transmission 5.52% (s.f.) Pfd.*	100.00	2.75N	5.52	—	—	a
		Common Stock—Offered to Stockholders					*Earn.-Price Ratio*	
1/5	26	Lone Star Gas	40.00	.32N	5.00	—	6.25%	f
1/19	7	Minneapolis Gas	29.25	.90N	5.47	—	7.35	—
		Common Stock—Offered to Public						
1/5	2	Southwest Gas	13.00	.88N	4.60	—	7.00	a
1/18	13	Gulf States Utilities	36.75	.59C	2.72	—	3.84	a

*Nonrefundable for a period of years. a—It is reported that the issue was well received. b—It is reported that the issue was fairly well received. d—It is reported that the issue sold slowly. e—This nonunderwritten issue was offered to common stockholders on rights basis. f—About 98 per cent subscribed. C—Competitive. N—Negotiated.

Source, Irving Trust Company

installed some 2,500 heat pumps, bringing its total to around 5,500; in 1961 it expects to add 3,000 more, raising the total to 8,500. Central resistance heating was installed in 3,500 homes last year, making the total 7,300. By 1963 the system hopes to have 17-18,000 heat pumps and 23,000 resistance-type electric heating installations.

On the other hand, Arkla Air Conditioning Corporation (subsidiary of Arkansas Louisiana Gas) recently issued a statement claiming that the gas air-conditioning "market eligibility" is expected nearly to quadruple in the next few years. An expanded range of Arkla unit capacities and a major absorption design "breakthrough" are expected to help accomplish this objective. While at present gas has unit capacities and designs to compete in only about 20 per cent of the total central system market in 1960 (according to W. G. Wepfer, Arkla's general sales manager), it anticipates being able to compete for about 80 per cent of the market within a year or so. Arkla showed some of its new models at the fifteenth International Heating and Air Conditioning Exposition in Chicago recently. The industry's 1961 goal is about 25,000 units—more than double last year's.

AGA and the Southern Gas Association recently issued a 29-page brochure, entitled "A New Look at New Schools—a research study showing how the use of natural gas will affect the owning and operating costs of the modern, air conditioned, secondary school."

Another Bell Labs "Breakthrough"

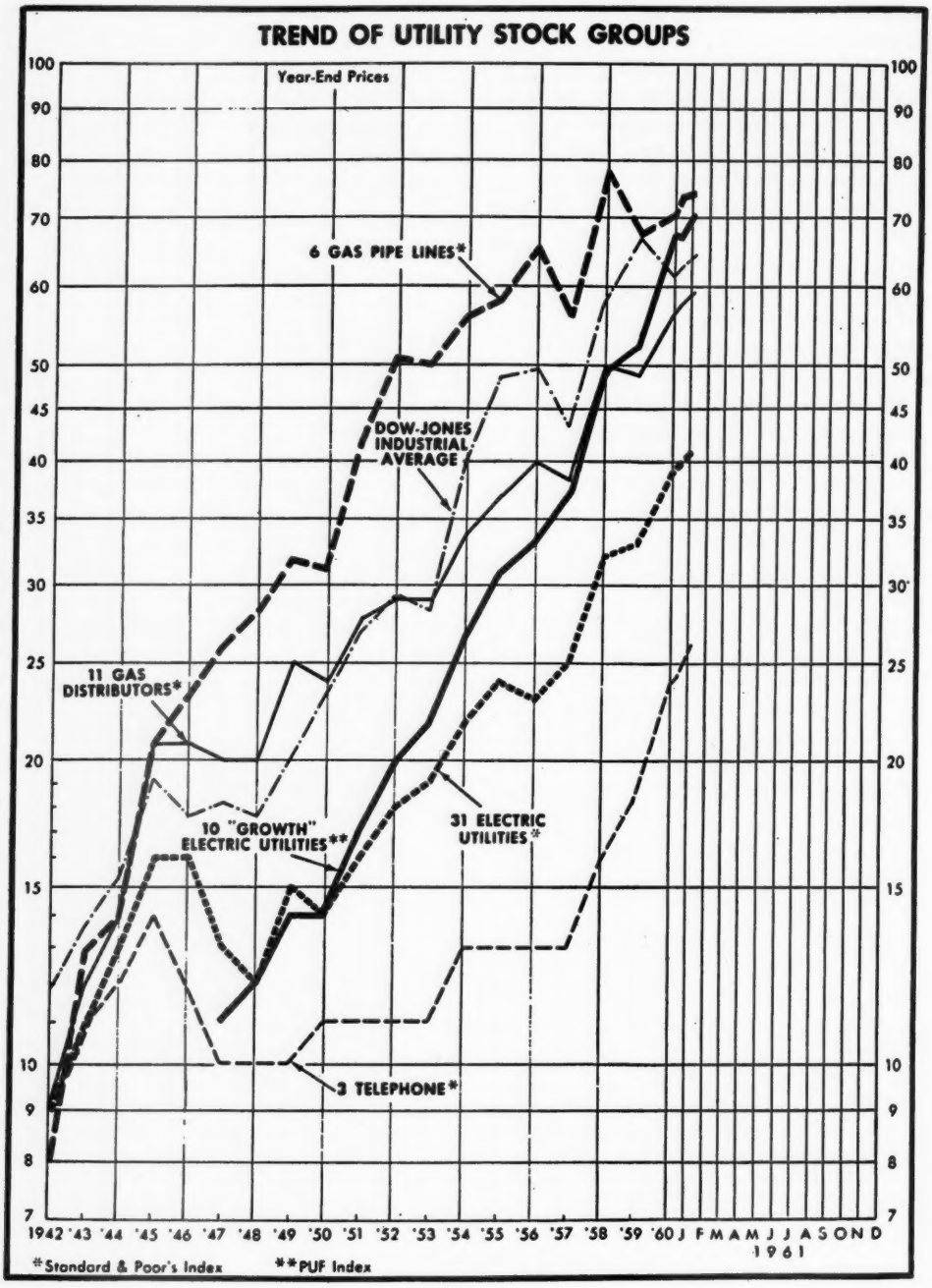
Bell Telephone Laboratories has invented and demonstrated a new optical-electronic device, a "maser that does everything," according to *Business Week* of February 4th. While the device is not very complicated and may not be very expensive to make, it reflects a great improvement over earlier maser devices, such as Hughes Aircraft's big ruby and IBM's solid crystal. (The latter has to be kept at a temperature near absolute zero.)

The new device will generate a tight infrared beam with miracle potentialities: It will carry a million simultaneous telephone conversations, or hundreds of TV programs. In outer space, it can send information and perhaps transmit power over millions of miles. It can supply controllable heat at temperatures of millions of degrees, for use in the study of chem-

CURRENT YIELD YARDSTICKS
(Standard & Poor's Indexes)

	Feb. 8, 1961	*1960-61 Range*		*1959 Range*	
		High	*Low*	*High*	*Low*
Utility Bonds—Al+	4.40%	4.72%	4.32%	4.71%	4.23%
—Al	4.45	4.73	4.36	4.76	4.24
—A	4.58	4.86	4.49	4.94	4.44
—Bl+	4.57	5.16	4.56	5.19	4.71
Preferred Stocks*	4.68	4.88	4.57	4.90	4.45
Utility Common Stocks	3.44	4.11	3.44	4.13	3.71
Yield Spread: Al+ Bonds Exceeded Common Stocks	0.96	0.61	0.88	0.58	0.52

*Twelve industrial and two utility issues (high-grade).


TREND OF UTILITY STOCK GROUPS
Year-End Prices
6 GAS PIPE LINES*
DOW-JONES INDUSTRIAL AVERAGE
11 GAS DISTRIBUTORS*
10 "GROWTH" ELECTRIC UTILITIES**
31 ELECTRIC UTILITIES*
3 TELEPHONE*
100
90
80
70
60
50
45
40
35
30
25
20
15
10
9
8
7
1942 '43 '44 '45 '46 '47 '48 '49 '50 '51 '52 '53 '54 '55 '56 '57 '58 '59 '60 J F M A M J J A S O N D
1961
*Standard & Poor's Index
**PUF Index

ical and nuclear reactions, or to drill holes in any known materials. The military will find it of use as a secret communications channel—nondetectable except by the intended receiver. Scientists will also find it the most precise standard of measurement ever made available, and one of the cheapest.

PRESUMABLY the ray cannot be bent, hence could only be transmitted for long distances by using mountain heights, high towers, or satellites. The question immediately occurs—can such a ray be substituted for microwaves in using towers for overland transmission, for use by the 50 satellites proposed by

CALENDAR OF PROPOSED UTILITY OFFERINGS
February 23, 1961, to June 30, 1961

Date of Bidding Or Sale	*Approx. Amount (Millions)*		*Method Of Offering*	*Moody Rating†*
		Bonds and Debentures		
3/21	$70	Southern Bell Telephone	C	—
3/22	15	Southwestern Public Service	N	A
3/23	13	Alabama Power	C	A
3/—	20	General Telephone of California	C	—
3/—	12	Arkansas Power & Light	C	A
*	25	Long Island Lighting	C	A
*	30	Michigan Consolidated Gas	C	A
*	28	Michigan-Wisconsin Pipeline	—	Baa
*	10	Missouri Public Service	N	—
**	30	Consumers Power	—	Aaa
*	8	California Electric Power	C	A
**	50	Columbia Gas	C	A
4/4	30	Southern California Edison	C	Aa
4/20	12	Orange & Rockland Utilities	C	—
5/—	18	Massachusetts Electric	C	—
5/—	10	Pennsylvania Electric	—	Aa
5/25	15	New Orleans Public Service	C	A
6/13	30	Virginia Electric & Power	C	Aa
6/15	27	Southern Electric Generating	C	A
**	65	Panhandle Eastern Pipe Line	N	A
**	15	Trunkline Gas	N	—
**	32	Arizona Public Service	—	—
**	30	Commonwealth Edison	C	Aaa
**	5	Community Public Service	C	A
		Preferred		
*	20	Baltimore Gas & Electric	—	
**	20	Consumers Power	—	
**	5	Trunkline Gas	N	
**	6	Central Hudson Gas & Electric	—	
2/—	5	Montana-Dakota Utilities	—	
3/22	3	Southwestern Public Service	N	
3/23	8	Alabama Power	C	
4/—	2	Northwestern Public Service	—	
		Common Stock—Offered to Public		
*	10	Texas Gas Transmission	—	
3/—	1	Northwestern Public Service	—	
		Common Stock—Offered to Stockholders		
**	20	Public Service of Colorado	—	
2/23	1,000	American Telephone & Telegraph	—	

†Preliminary, or rating of similar issues. *Expected in first quarter of 1961. **Expected in second quarter of 1961. C—Competitive. N—Negotiated.

AT&T for intercontinental communications?

Public Power Agencies Apprehensive of Tax Burdens

SHERMAN R. KNAPP, president of the Edison Electric Institute, considers *tax inequities* the Number One problem of the investor-owned public utilities, stating that "the greatest threat to our industry continues to be subsidized competition from governmental power undertakings, and the major handicap in meeting this threat is tax inequality." In an article in the *EEI Bulletin* for December he referred to statements from the June issue of *Public Power*. The American Public Power Association has apparently become quite concerned about the possibility that local public power agencies may be called upon to pay federal income taxes, even though they regard this as unconstitutional and illegal.

OBVIOUSLY, Mr. Knapp pointed out, the fears expressed by spokesmen for public power regarding possible imposition of new taxes is a confession that "government and business must be sheltered from the harsh realities of taxes and money costs paid by the investor-owned utilities."

FINANCIAL DATA ON GAS UTILITY STOCKS

Approx. Revenues (Mill.)			*2/8/61 Price About*	*Dividend Rate*	*Approx. Yield*	*Recent Share Earns.*	*Per Cent Increase In Share Earn. Recent*	*5-yr. Avg.*	*Price-Earn. Ratio*	*Div. Payout*	*Approx. Common Stock Equity*
		Pipeline and Integrated Companies									
$ 6	O	Ala.-Tenn. Nat. Gas	26	$1.20	4.6%	$1.55Se	5%	8%	16.8	77%	43%
227	S	American Nat. Gas	86	3.00	3.5	4.90Se	12	7	17.5	61	40
111	A	Ark.-Louisiana Gas	39	1.00	2.6	1.65Se	—	50	23.6	64	40
62	O	Colo. Interstate Gas	44	1.25r	2.8	1.87Se	NC	11	23.5	67	26
465	S	Columbia Gas System ...	24	1.10	4.6	1.50Se	15	6	16.0	73	44
21	O	Commonwealth N. G. ...	27	1.10	4.1	1.75De	7	6	15.4	63	52
324	S	Consol. Nat. Gas	55	2.30	4.2	3.45Se	12	3	15.9	67	58
452	S	El Paso Nat. Gas	29	1.30g	4.5	1.38De'59	3	11	21.0	94	21
55	S	Equitable Gas	40	1.85	4.6	2.38Se	D9	11	16.8	78	46
47	O	Houston N. G.	30	.80	2.7	1.73Oc	43	20	17.3	46	21
24	O	Kansas Nebr. Nat. Gas .	28	1.19	4.3	1.86Se	14	6	15.1	64	36
125	S	Lone Star Gas	46	2.00	4.3	2.50Se	7	6	18.4	80	47
88	S	Miss. River Fuel	37	1.60	4.3	2.19De'59	12	5	16.9	73	50
31	S	Montana Dakota Util. ..	34	1.20	3.5	1.97Se	15	5	17.3	61	30
29	S	Mountain Fuel Supply ..	33	1.40	4.2	1.84Se	8	4	17.9	76	53
94	S	Nat. Fuel Gas	26	1.20	4.6	1.79Se	D6	6	14.5	67	52
159	S	Northern Nat. Gas	33	1.40	4.2	2.21Se	20	7	14.9	63	32
43	S	Oklahoma Nat. Gas	34	1.40	4.1	2.04De	5	5	16.7	69	34
137	S	Panhandle East. P. L. ..	50	1.80	3.6	3.30De'59	18	9	15.2	55	38
226	S	Peoples G. L. & Coke ..	73	2.60	3.6	4.38Se	17	8	16.7	59	43
33	O	Pioneer Natural Gas	30	.88	2.9	1.25De	D10	9	24.0	70	41
122	S	Southern Nat. Gas	44	2.00	4.5	2.13Se	15	—	20.7	94	36
46	O	Southern Union Gas	29	1.12	3.8	1.50De'59	7	3	19.3	75	29
463	S	Tenn. Gas Trans.	24	1.10	4.6	1.35De	20	17	17.8	81	26
296	O	Texas East. Trans.	32	1.40	4.4	2.52Se	28	4	12.7	56	21
116	S	Texas Gas Trans.	37	1.50	4.1	2.58Se	14	4	14.3	58	21
147	O	Transcont. Gas P. L. ...	23	1.00u	4.3	1.25Se	7	10	18.4	80	20
354	S	United Gas Corp.	35	1.50	4.3	2.09Se	D12	2	16.7	72	40
		Averages			4.0%		10%	9%	17.5	69%	
		Retail Distributors									
$ 40	S	Alabama Gas	33	$1.60	4.8%	$2.15De	16%	—	15.3	74%	33%
68	O	Atlanta Gas Light	47	1.80	3.8	3.18N	56	9%	14.8	57	44
3	O	Berkshire Gas	19	1.00	5.3	1.22N	5	5	15.6	82	42

Approx. Revenues (Mill.)		(Continued)	2/8/61 Price About	Dividend Rate	Approx. Yield	Recent Share Earns.	Per Cent Increase In Share Earn. Recent	5-yr. Avg.	Price-Earn. Ratio	Div. Payout	Approx. Common Stock Equity
7	A	Bridgeport Gas	33	1.68	5.1	2.11Se	D5	5	15.6	80	48
6	O	Brockton-Taunton Gas ..	22	1.00	4.5	1.22De'59	D6	14	18.0	82	41
89	S	Brooklyn Union Gas	32	1.20	3.8	*1.75De	* 5	* 6	*18.3	70	42
52	O	Central Elec. & Gas	32	1.20c	3.8	1.95Se	14	8	16.4	62	17
14	O	Cent. Indiana Gas	17	.80	4.7	.82N	5	—	20.7	98	58
7	O	Chattanooga Gas	5¼	.30	5.5	.48N	84	5	11.5	63	54
16	O	Elizabethtown Gas	51	1.80	3.5	3.49Oc	30	11	14.6	52	79
77	O	Gas Service	39	1.72	4.4	2.21De	D21	8	17.6	78	35
9	O	Hartford Gas	54	2.40	4.4	3.12De	20	—	17.3	77	51
3	O	Haverhill Gas	29	1.60	5.5	1.86De	D11	7	17.6	86	55
21	O	Indiana Gas & Water ..	25	1.00	4.0	1.61N	10	5	15.5	62	46
62	S	Laclede Gas	27	1.05	3.9	1.60De	27	5	17.0	66	38
9	A	Louisiana Gas Service ..	18	.68x	3.8	1.22Au	NC	—	14.7	56	48
7	O	Mich. Gas Utils.	15	.60	4.0	1.14Se	54	5	13.2	53	37
53	O	Minneapolis Gas	35	1.60	4.6	2.15Se	10	—	16.3	74	43
18	O	Miss. Valley Gas	27	1.20	4.4	1.93Se	D3	—	14.0	62	37
6	O	Mobile Gas Service	26	1.10	4.2	1.39Se	11	4	18.7	79	38
8	O	New Haven Gas	41	2.00	4.9	3.24De'59	5	5	12.7	62	68
18	O	New Jersey Nat. Gas ...	30	.90f	5.0f	*1.56De	*14	*11	*19.9	58	34
105	O	Nor. Illinois Gas	43	1.20	2.8	2.02N	21	14	21.3	59	42
11	O	North Penn Gas	13	.65	5.0	1.18Je	28	7	11.0	55	65
20	O	Northwest Nat. Gas	26	.84	3.2	*1.57De	*20	*11	*16.6	53	36
307	S	Pacific Lighting	54	2.40	4.4	3.43De	31	2	15.7	70	41
12	O	Piedmont Nat. Gas	14	.50	3.6	.83Se	14	—	16.9	61	27
2	O	Portland Gas Lt.	15	.75	5.0	1.93De'59	D12	13	7.8	39	27
11	A	Providence Gas	10½	.56	5.3	.58N	D13	5	18.1	97	48
4	A	Rio Grande Valley Gas .	5	.16	3.0	.30Je	D8	7	16.7	53	46
5	O	So. Atlantic Gas	15	.80	5.3	.87De'59	D28	—	17.2	92	30
16	S	So. Jersey Gas	32	1.10	3.4	1.45De	11	13	22.1	76	51
36	S	United Gas Impr.	58	2.40	4.1	3.42De	1	10	17.0	70	49
63	S	Wash. Gas Light	57	2.40	4.2	3.79De	8	3	15.0	63	39
18	O	Wash. Nat. Gas	29	1.00	3.4	1.45De	4	20	20.0	69	38
11	O	Western Ky. Gas	22	.80x	3.6	1.54De	9	15	14.2	52	36
		Averages			4.3%		12%	6%	16.3	70%	

FINANCIAL DATA ON TELEPHONE, WATER, AND TRANSIT STOCKS

Approx. Revenues (Mill.)			2/8/61 Price About	Dividend Rate	Approx. Yield	Recent Share Earns.	Per Cent Increase In Share Earn. Recent	5-yr. Avg.	Price-Earn. Ratio	Div. Payout	Approx. Common Stock Equity
		Communications									
$6,771	S	American T. & T. (Cons.)	113	$3.60h	3.2%	**$5.52N	7%	4%	**20.5	65%	64%
377	A	Bell Tel. of Canada	49	2.20	4.5	2.39De'59	12	—	20.5	92	62
51	O	Cin. & Sub. Bell Tel. ..	105	4.50	4.3	5.57De'59	8	2	18.9	81	77
288	A	Mountain States T. & T.	29	.90	3.1	1.36N	10	7	21.3	66	59
380	A	New Eng. T. & T.	43	1.72	4.0	2.37De	7	7	18.1	73	59
1,040	S	Pacific T. & T.	37	1.14	3.1	**1.45N	1	6	**25.5	79	57
128	O	So. New Eng. Tel.	48	2.20	4.6	2.51De'59	D3	5	19.1	88	65
		Averages			3.8%		6%	4%	20.5	78%	
		Independents									
$ 7	O	Anglo-Canadian Tel.	49	$1.20	2.4%	$3.47Je	10%	21%	14.1	35%	44%
45	O	British Col. Tel.	48	2.20	4.6	2.84Se	8	—	16.9	77	28
4	O	Calif. Inter. Tel.	16	.70	4.4	.51Se	D45	NC	31.4	137	24
25	O	Calif. Water & Tel.	33	1.36	4.1	1.93Se	D3	5	17.1	70	36
22	O	Central Tel.	26	.88w	3.4	1.59Se	3	—	16.4	55	33
5	O	Commonwealth Tel.	24	.90	3.8	1.47De'59	9	8	16.4	61	35
5	O	Florida Tel.	29	1.00	3.4	1.32De'59	32	4	22.0	76	40
1,081	S	General Tel. & Elec.	29	.76	2.6	**1.07Se	D3	10	**27.1	71	43
25	O	Hawaiian Telephone	30	1.00	3.3	**1.48N	19	4	**20.3	68	42

Approx. Revenues (Mill.)		(Continued)	2/8/61 Price About	Dividend Rate	Approx. Yield	Recent Share Earns.	Per Cent Increase In Share Earn. Recent	5-yr. Avg.	Price-Earn. Ratio	Div. Payout	Approx. Common Stock Equity
8	O	Inter-Mountain Tel.	18	.80	4.4	.77De'59	D15	—	23.4	104	53
9	A	Puerto Rico Tel.	84	1.80	2.1	(y)	D1	—	—	93	42
26	S	Rochester Tel.	25	1.00	4.0	1.48Je	D7	5	16.9	67	36
12	O	Southwestern St. Tel. ..	28	1.20	4.3	1.70Se	15	3	16.5	70	42
13	O	Tel. Service of Ohio	33	.36	1.1	1.31Je	40	8	25.2	27	32
42	O	United Utilities	49	1.45	3.0	1.95De'59	19	14	25.1	74	39
19	O	West Coast Tel.	31	1.20	3.9	1.94De'59	10	5	16.0	62	37
276	S	Western Union	44	1.40	3.2	2.59De'59	31	15	17.0	54	87
		Averages			3.4%		7%	7%	20.1	70%	
		Water Companies									
		Holding Companies									
$ 48	S	American Water Works .	22	$1.00	4.5%	$1.60Se	21%	7%	13.8	50%	19%
		Operating Companies									
$ 5	O	Bridgeport Hydraulic ...	41	$1.70	4.1%	$1.86De'59	6%	5%	22.0	91%	55%
17	O	Calif. Water Service ...	27	1.20	4.4	1.48De	D15	2	18.2	81	31
5	O	Elizabethtown Water ...	30	1.20	4.0	2.20De'59	17	—	13.6	55	60
12	S	Hackensack Water	56	2.40	4.3	*4.36De'59	*32	* 6	*12.8	55	35
10	O	Indianapolis Water	28	1.20s	4.3	1.70Se	7	5	16.5	70	34
6	O	Jamaica Water	44	2.20	5.0	3.10Se	D3	17	14.2	71	28
5	O	New Haven Water	68	3.40	5.0	2.91De'59	D12	—	23.3	117	55
2	O	Ohio Water Service	30	1.50b	5.0	1.65Se	D6	—	18.2	91	33
11	O	Pennsylvania Gas & Watr.	31	1.40	4.5	1.82Se	12	6	17.0	77	29
11	O	Phila. & Sub. Water	60	1.80v	3.0	3.24Se	7	5	18.5	56	29
3	O	Plainfield Un. Water ...	23	1.10	4.8	2.31De'59	44	12	10.0	43	66
5	O	San Jose Water	42	1.30	3.1	2.20De	D2	10	19.1	59	41
7	O	South. Calif. Water	27	1.10	4.1	1.51De	10	8	17.9	73	36
4	O	Southern Gas & Water ..	25	.80d	7.2d	1.72My	24	5	14.5	47	19
		Averages			4.5%		12%	6%	16.8	69%	
		Transit Companies									
$ 21	O	Baltimore Transit	9	—	—	$1.02De'59	72%	11%	8.8	—	45%
12	O	Cincinnati Transit	8	$ .30	3.8%	.91De'59	193	—	8.8	33%	56
66	S	Fifth Ave. Lines	16	1.00t	6.3	.23De'59	—	—	—	—	65
322	S	Greyhound Corp.	21	1.00a	4.8	1.64De	—	7	12.8	61	62
26	S	Nat. City Lines	24	2.00	8.3	2.22De'59	33	—	10.8	90	92
13	O	Niagara Frontier Trans.	17	.60	3.5	.76De'59	—	—	22.4	79	67
20	A	Pittsburgh Rys.	14	.25	1.8	—	—	—	—	—	90
6	O	Rochester Transit	7	.40	5.7	1.08De'59	26	—	6.5	37	100
21	O	St. Louis P. S.	10	.80	8.0	.77De'59	13	—	13.0	104	93
13	S	Twin City R. T.	11	1.00	9.1	.59De'59	146	—	18.6	170	65
20	O	United Transit	6	.70	11.7	.89De'59	18	2	6.7	79	54
		Averages			6.3%		52%	2%	12.0	81%	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. *Deferred taxes resulting from liberalized depreciation are not normalized. If normalized, the price-earnings ratio would be higher, and the rate of increase in share earnings would be smaller. **On average shares. D—Decrease. a—Also 10 per cent stock dividend October 24, 1960. b—Also 2 per cent stock dividend September 30, 1960. c—Also one-half per cent stock dividend October 31, 1960. d—Also 1 per cent stock dividend quarterly (included in yield). e—Also 3 per cent stock dividend January 7, 1960. f—Regular annual 2 per cent stock dividend included in yield. g—Stock split 5 for 4 to stockholders of record October 11, 1960. h—Dividend rate of $3.60 per annum to be established beginning with July 10, 1961, payment. i—Also 10 per cent stock dividend January 15, 1960. q—Indicated new rate after 8-for-1 split July 15, 1960. r—Also 40 per cent stock dividend June 13, 1960. s—One share of 111 Realty Corp. common for each 10 shares held, paid March 31, 1960. t—Paid to date. u—Twenty per cent stock dividend paid January 15, 1960. v—Also 3 per cent stock dividend payable January 6, 1961. (Similar dividend was paid January 7, 1960.) w—Also 1 per cent stock dividend payable December 31, 1960. x—Also 12½ per cent stock dividend payable October 7, 1960. y—Nineteen hundred and sixty earnings estimated at $3.50 or more. NC—Not comparable.

What Others Think

American Business and the Cold War

On January 25th Senator Jacob K. Javits (Republican, New York) addressed the annual meeting of the House Magazine Institute workshop at the Hotel Pierre in New York city. Senator Javits' speech was made to some 200 industrial editors and business leaders who attended the meeting. He was introduced by Julian M. Snyder, workshop chairman, who is publication manager for the New York Telephone Company. The Senator called on American businessmen to lead the national peace offensive as this country's answer to the Soviet Union's challenge for economic supremacy. In enlisting the support of business, labor, management, consumers, and farmers, Senator Javits said that one of the greatest challenges of our society is to find the means for enlisting our total economic strength in an effort to win the peace.

The Senator stated that failure of business to take a strong hand in the peace offensive represents the greatest single deficiency in our peace efforts thus far. He called on business to seek from our government close co-operation in overseas operations and to rid itself of documentary ideas about the policies and practices of other governments. He suggested that business

(1) Seek to expand exports and effectively meet the competition of the corresponding necessary imports.

(2) Expand productivity and automation and to develop means for making the transition for individual employees and individual businesses fair and free of hardship.

(3) Be concerned with the social and economic effects of overseas investment and operations on people of the host nations.

(4) Back our government in carrying on an adequate mutual security program and foreign assistance efforts.

(5) Assure equal opportunity for all our citizens and for citizens in the foreign countries in which they operate without regard to creed, color, or national origin.

The Senator believes that business should seek from the government close co-operation in overseas operations. He also urged that those in business should not be overawed by the hugeness and complexity of the federal government. In this reference he stated:

> I think it is absolutely fantastic that businessmen say they can't get anything out of the State Department, the State Department won't tell them yes or no or maybe about a particular project.

The answer is that they ought to be breaking down the doors of the State Department. They have Congress and they have Senators and that is our job. If they come and tell us when the State Department is not performing, we will break down the doors of the State Department. We are pretty good at that. We break them down for a lot less important purposes than that. No businessman should get away with the self-excuse that the State Department isn't co-operating, because there are a lot of ways to get the State Department to co-operate if what is sought is proper co-operation.

Senator Javits warned the group that the economic struggle with communist nations must be waged in a large part by the U. S. business community. He stated that America is out to prove that the degree of self-discipline achieved by the individual in business and in government under our system is so great that we can be trusted to run our own affairs with full equality of opportunity and respect for the rights of the individual.

BUSINESS ought to participate in politics, he stated. The results of a survey by a major U. S. steel company showing that nearly eight out of ten of its major supervisors were not well informed in government matters, came as a shock to many, he commented. The Senator praised company-sponsored political training programs for employees where those participating are urged to study all facets of the issue and become active locally in the political party of their choice.

SENATOR Javits' remarks point out the vast responsibility that rests on the shoulders of the American businessman. All too often we are inclined to relegate the responsibility of making our economic way of life survive to the federal government. In this we forget and, indeed, neglect the fact that the federal government is composed of individuals who reflect the vitality of the nation's economic and social status. If business, or society itself, stagnates, the federal government is robbed of its most important weapon, and surrender to an alien economic form would be inevitable. Senator Javits' speech should make the business community aware of the awesome national responsibility entrusted to it by virtue of our free enterprise system.

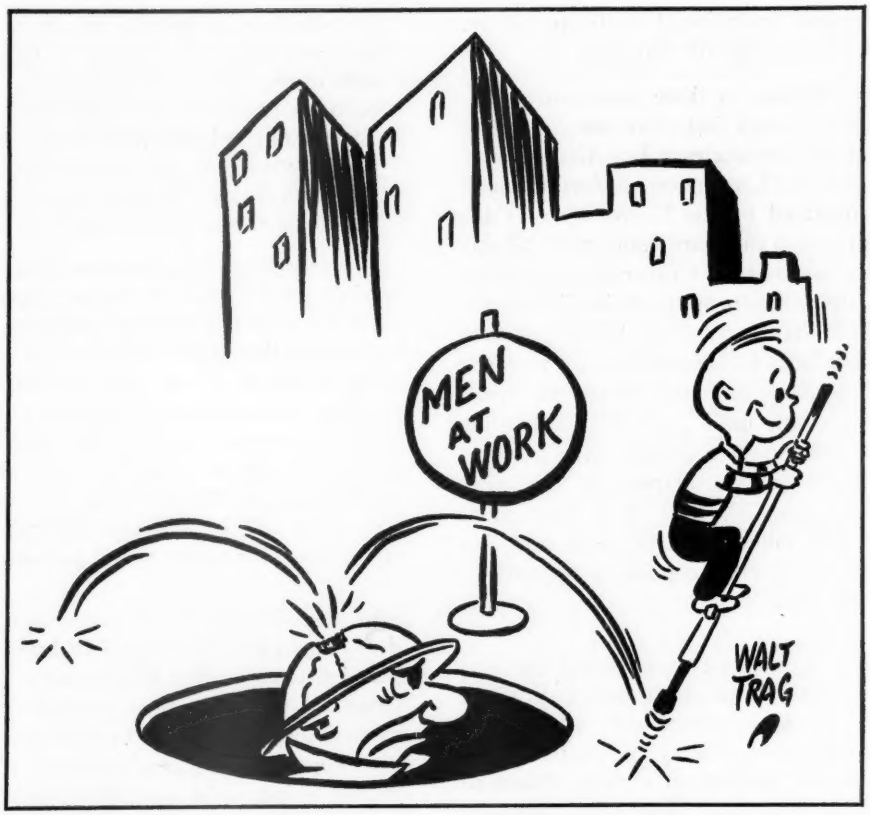
—C.M.B.

Universities and Atomic Development

ON January 25th, the University of Maryland dedicated its new nuclear reactor. As part of these ceremonies, A. R. Luedecke, general manager of the Atomic Energy Commission, spoke regarding the co-operation necessary between the AEC and institutions of higher learning.

Mr. Luedecke noted that members of the AEC have lectured at the University of Maryland and university instructors, in turn, have sponsored off-campus classes at the AEC's Germantown, Maryland, headquarters.

In an effort to promote the study of atomic energy the AEC's fellowship board each year awards 150 graduate fellowships to young scientists and engineers for study at the 52 institutions which are participating in the commission's graduate training program. Mr. Luedecke stated that important work regarding the atom has been, and continues to be, conducted by universities. In this regard he stated



that the AEC has given substantial aid for equipment to these schools.

OFTEN professors and universities are accused of promoting an intellectual "ivory tower" atmosphere. It appears, however, from Mr. Luedecke's remarks, that this is not true in the field of atomic energy.

He observed that since the days of the first nuclear chain reaction, which was achieved at Stagg field at the University of Chicago in 1952, contributions of the colleges has been close and direct. He stated:

> Commission laboratories, which the AEC regards as vital national assets, include the three so-called "national" laboratories—Argonne, Oak Ridge, and Brookhaven. Two of these are operated by universities—Argonne, near Chicago, by the University of Chicago and Brookhaven on Long Island by nine associated northeastern universities. Oak Ridge, in Tennessee, is operated for the commission by a contractor, but even here universities have a hand. The Oak Ridge Institute of Nuclear Studies, whose purpose is to stimulate co-operation between the government and universities in fundamental nuclear research, comprises a group of 38-member southern and southwestern uni-

versities, including, I am happy to say, the University of Maryland.

In addition to these laboratories Mr. Luedecke noted that there are the atomic weapons laboratories at Los Alamos, New Mexico, and Livermore, California, which are operated by the University of California. Also there are "university laboratories" such as the University of Rochester Riomedical project. All in all the commission has a total of 1,050 contracts with colleges and universities for research and development work. Since this work was started, until June 30, 1960, some $300 million in contracts have been let for these projects. During the fiscal year ending June 30, 1961, it is anticipated that $75 million will be spent and this figure is expected to jump to $80 million during 1962.

MR. LUEDECKE also pointed out that AEC aid to educational institutions has included equipment which has enabled these schools to establish curricula for training in various phases of nuclear education. The AEC has also loaned about $11 million in nuclear materials to institutions of higher learning. Regarding the general scheme of the AEC's aid to colleges, Mr. Luedecke stated:

> Increasing nuclear facilities on college and university campuses resulting from these programs and from individual efforts on the part of the institutions themselves are creating a favorable situation in which our institutions of higher learning can begin to assume their rôle of providing the trained man power needed by the entire atomic community.
>
> It is clear that the colleges and the universities of the United States must be looked to to provide atomic scientists and engineers trained in nuclear technology. While the universities will continue to handle both graduate and undergraduate levels with emphasis on graduate students, the commission-supported facilities will make greater contributions at the postdoctoral level.

It was pointed out, however, that universities must assume the major responsibility for nuclear education and there are indications that these facilities will have to be increased if we want to avoid a shortage of engineers, scientists, and medical personnel by 1970. Mr. Luedecke observed that it is "virtually certain" that by 1968, as a result of various AEC projects, there will be a substantial increase in the need for such trained persons.

As an indication of the ever-expanding uses of atomic energy, Mr. Luedecke stated that more than 10,000 licenses for peacetime uses have been granted by the commission. About 8,300 of these relate to isotopes. Agriculture, medicine, and a variety of industries use radioisotopes and new and varied applications continue to be uncovered. Nuclear power for propulsion is a reality with the superior performance of the Navy's atomic-powered submarines. This summer the ship, *Savannah,* the first nuclear-powered merchant ship, is scheduled to begin ocean trials. The AEC is also engaged in work on the development of atom-powered aircraft.

Of prime interest to the utility industry is the generation of electric power from the atom. Mr. Luedecke stated:

> In the matter of central station power from nuclear reactors, three such stations already are in existence and have been furnishing various amounts of electricity for home and industrial use.

These are the 60,000-kilowatt station at Shippingport, Pennsylvania, the first ever to be brought into production; the 180,000-kilowatt station of the Commonwealth Edison Company, of Chicago, at Morris, Illinois; and the 110,000-kilowatt station of the Yankee Electric Company at Rowe, Massachusetts.

Other nuclear power stations are expected to go on the line this year and still others are expected to become producers of electricity in 1962. We are confident that by about 1968 nuclear power will be competitive with that from fossil fuels in large stations of 300,000 kilowatts or more in high-cost fuel areas such as New England and the Pacific coast.

Mr. Luedecke emphasized to the university group that one of the prime concerns of the AEC was safety. It is for this reason, he stated, that the Atomic Energy Act provides for a comprehensive system of licensing and regulation of all private activities in the field.

He stressed that it is the responsibility of the United States to remain in the forefront of atomic development. However, he was quick to add that this responsibility cannot belong to the AEC alone and it must be shared by business, industry, and the universities of the nation. It is to the universities that the nation looks for trained scientists and engineers and the need for trained personnel may be the most important need of all.

Energy Consumption in 1975

A study of energy use and availability in the United States, looking back over the past century and ahead for the next fifteen years, was completed recently. The book, *"Energy in the American Economy 1870-1975,"* was written by Sam H. Schurr and Bruce C. Netschert in collaboration with Vera F. Eliasberg, Joseph Lerner, and Hans H. Lansberg.

Some excerpts from this book of special interest to the utility industry were published in Resources for the Future, Inc.'s, annual report for 1960.

In the section on future needs of the country energywise, the authors predict that there will be an 88 per cent increase in total energy consumption between 1955 and 1975. They deliberately exclude nuclear power in their findings because of lack of data. Also, they do not believe by 1975 nuclear power will attain any sizable proportions of the energy requirements—not more than 15 per cent of total electrical productions.

Here—in chart form—is how energy consumption will be divided among various types of fuels in 1955 and 1975:

	1955	*1975*	*Percentage Change 1955-75*
Bituminous coal (million tons)	431	754	+ 74.9
Anthracite (million tons)	20	14	− 30.0
Crude oil (million bbl.)	2,774	5,154	+ 85.8
Natural gas liquids (million bbl.)	260	769	+195.8
Natural gas (billion cu. ft.)	9,614	19,881	+106.8
Hydro power (billion kwh.)	120	265	+120.8
Consumed as electricity (billion kwh.)	633	1,966	+210.6

The authors also inquired into the adequacy of domestic resources to meet the projected 1975 requirements. Postwar increases in the price of domestic oil and gas and increases in oil imports have caused considerable apprehension as to the adequacy of United States resources to meet future demands.

Say the authors:

Viewed strictly from the standpoint of its national resource position, and with due allowances for technological advance, the United States in 1975 or thereabouts could satisfy its demands for all energy, and for each of the energy materials of which the total is composed, from domestic sources of supply at no significant increases in costs, except for those which might be brought about by a rise in the general price level.

This conclusion as to what *could* be done is, as the study points out, neither a prediction of what *will* happen, nor a recommendation of what course *should* be followed. Although the conclusion bears directly on some of the arguments which have been put forward on such important policy issues as oil imports, and the pace and scope of the government's program for developing nuclear energy, it is only one of the factors to take into account in reaching decisions on these matters.

THE authors' findings make it clear that "the United States is not compelled to adopt particular policies, as is sometimes contended, because of impending resource exhaustion in any of the mineral fuels, or the threat of steeply rising costs." The report emphasizes that decisions on such policy questions can be reached on their individual merits and calmly, not in an atmosphere charged with apprehension about the country's ability to satisfy its future needs at reasonable costs.

TVA Fuel Costs

IN addition to pioneering in the field of integrated resource development, the Tennessee Valley Authority has been able to take a leading rôle in the trend toward more and more economical steam-electric generation through the use of larger and larger generating units which burn less coal and require less labor per kilowatt-hour of energy produced. This is the statement recently made by A. R. Jones, vice chairman of the TVA board of directors, before the Society of American Military Engineers, at San Francisco, California.

Mr. Jones spoke at a dinner meeting of the society, using as his subject "TVA and the Nation." He stated that although TVA operates mainly in a relatively small and integrated region, it is a valuable asset of the entire United States. It contributes, he indicated, directly and indirectly, to the national strength and security, both economically and militarily. As units have become larger, design and manufacture have been improved, with higher temperatures and higher boiler pressures and more economical use of fuel.

MR. JONES stated that TVA has been able to convert more and more of the energy in a pound of coal into electricity. At the same time, because TVA is such a large consumer of coal, it has been able to streamline its purchasing methods and enter into long-term contracts for much of its coal, with resultant reductions in cost per ton and per million Btu's.

He stated:

> TVA is concerned with all aspects of resource development — navigation, flood control, efficient water use for several purposes, fertilizer research, agricultural and forest improvement— as well as the production and distribution of low-cost electric power.
>
> In passing the bond authorization amendment to the TVA Act, the Con-

"YOU'RE SURE THIS IS CLOSED CIRCUIT, NOW?"

gress reaffirmed its intent that power be provided at low cost, directing that the TVA administer the bonding provisions with "due regard for the primary purposes of the act, including the objective that power shall be sold at rates as low as are feasible."

Mr. Jones indicated that it is self-evident that low rates are feasible only if costs are low. Thus, TVA is concerned with the thermal-generating plants, since the hydro potential of the Tennessee valley is largely developed. He stated that of the 3 million kilowatts of capacity now under construction or on order (which will bring the system total to 15 million kilowatts) all but a small portion will be in steam plants. Therefore, Mr. Jones noted that TVA is deeply concerned with lowering thermal-generating costs by: (1) installation of larger and more efficient units; and (2) procurement of fuel at the lowest possible cost.

RECENTLY compiled figures, Mr. Jones noted, on experience in steam-electric power generation costs for 1950 through

the 1960 period, indicate that although construction, labor, and material costs have been rising, TVA costs, per kilowatt-hour of steam generation of electricity, have gone down. During this period, the average size of steam-electric generating units has increased from 15,000 kilowatts to 119,000 kilowatts. This calculation, he stated, does not include a 500,000-kilowatt unit just recently placed in commercial operation. The largest unit in 1960 was 275,000 kilowatts, in contrast with a 60,000-kilowatt unit in 1950. Since 1954 the average cost per kilowatt of installed capacity has been about $130 as compared with some $70 per kilowatt up to 1950.

In 1950, Mr. Jones indicated that the TVA steam plants used nearly 13,500 Btu's to produce a kilowatt-hour of electricity. In the last fiscal year—1960—the TVA system average was only 9,590 Btu's per kilowatt-hour produced. In 1956 the TVA system average was 9,780 Btu's per kilowatt-hour and this was the first time any system in the United States came under 10,000.

MR. JONES observed that over the same period of time there has been a reduction in TVA's cost of coal per million Btu's. Coal cost per million Btu's in 1950 was 26.5 cents and 20.6 cents in 1951. TVA, Mr. Jones stated, now has reduced this figure to under 19 cents. TVA presently has a 17-year contract for coal for a new 650,000-kilowatt unit with a cost of only 13.7 cents per million Btu's. Regarding this project, Mr. Jones stated as follows:

> In the case of the contract just mentioned, the mining firm supplying the coal is designing strip-mining and transportation equipment of unprecedented size. A power shovel capable of scooping up 115 cubic yards of overburden in a single bite will expose the coal seams. Coal will be trucked from nearby mines over heavy-duty roads in 100- and 200-ton trucks.
>
> The combination of lower-cost coal and more efficient use of coal by larger generating units has brought the fuel cost of electricity generation down markedly. In 1950—and a typical year—fuel cost was about 3.6 mills per kilowatt-hour generated, and the next year it was about 2.8 mills. By 1954 it was down to 2.0 mills and has remained below that figure ever since. In 1960 the average fuel cost per kilowatt-hour was 1.8 mills, the lowest so far achieved by the TVA system.

THE most spectacular reduction, Mr. Jones indicated, has been in labor costs. This has resulted from the fact that the larger plants and larger units require fewer men to operate them. In 1950, a year when steam-electric generation by the system was small, the labor cost per kilowatt-hour was more than 1.5 mills. The next year it was down to about 0.86 mills. Since then, he stated, it has dropped to 0.42 mills per kilowatt-hour in 1954, and has remained below 0.40 mills ever since; in some years it has been below 0.30 mills per kilowatt-hour, and in 1960 it was 0.32 mills per kilowatt-hour. This greater efficiency has been made possible by larger and more modern units and it has also enabled TVA to maintain low cost of generation despite increases in construction and wage costs.

While there may be—almost certainly must be—limits to the extent to which efficiency of generating equipment can be improved, Mr. Jones stated that TVA has not reached this point.

IN relation to future plans, Mr. Jones observed that TVA has on order two

additional generating units which will be installed in the eastern part of the system at a site yet to be decided upon. These units of 800,000-kilowatt capacity each push the heat rate, one of the measures of efficiency of generating units, even lower.

Mr. Jones believes that the use of these steam-electric generating units of larger and larger sizes, coupled in operation with the hydroelectric plants of the TVA multiple-use system, can be expected to hold the line on power-generating costs for the benefit of both the TVA area and the nation.

—C. M. B.

Volkswagen Denationalizes

THE Volkswagen has become a more or less standard fixture on the roads of America. The company which produces these economy cars has had a varied and interesting career and another amazing chapter has just recently been added.

The company was started by Hermann Göring, one of the chief henchmen of Adolf Hitler. It was their espoused idea that the Volkswagen, literally "the people's car," would become "the car in every garage" for the Germans. In reality, however, the majority of the funds were spent for weapons used in the Second World War.

At the close of the war the state-owned company again turned to the manufacturing of automobiles. The success of this project can be judged by the vast number of "bugs" that now scoot along America's highways. Some smug commentators on international economics have commented that the German economy has grown to such an extent that no self-respecting German would drive a Volkswagen, preferring the larger and more expensive models that are now available. Be that as it may, the "little bug" has multiplied at an astounding rate and the export of this auto added much to Germany's recovery.

THE latest page in the Volkswagen story was just recently written when the West German government permitted the sale of stock in the company. What this amounts to is the denationalization of a thriving industry. A recent editorial in the *Birmingham Post-Herald* had this to say about this unprecedented action:

> Contributing to eventual downfall was the socialist system under which Germany operated. It is highly significant that postwar Germany has set itself firmly against both inflation and Socialism. The West German mark now probably is the soundest currency in the world and even the German Socialist party has abandoned most of its former dogma, turning specifically against government ownership and operation.
>
> The record of the new Germany is proof that even bread-and-butter ends are better served under freedom. This Volkswagen transfer helps dramatize what may be a turning point in world economic history.

ADVOCATES of the free enterprise system are often prone to throw up their hands and write off any industry which the government enters into. The denationalization of the Volkswagen industry is dramatic proof that preservation of the free enterprise system is not only a holding action but can also be an active turning back of industries already taken over.

As the Birmingham editorial suggests, this action by the West German government may very well be a "turning point in world economic history." Only time will tell if other governments will follow in West Germany's footsteps.

Notes on Recent Publications

AUTO FLEET LEASING. A revised edition of a 28-page study on the advantages and disadvantages of leasing auto fleets by industry has been issued by The Foundation for Management Research. It is entitled, "Advantages and Disadvantages of Auto Fleet Leasing: A Comparison of Company Ownership, Salesman Ownership, and Leasing." New data are included in this edition concerning the shift of industry toward leasing auto fleets. Situations in which companies are better off leasing are discussed, as well as situations in which other methods of fleet ownership are preferable.

Five complete tables and charts are included which analyze both fixed and variable costs at different mileages and disclose the effects of different plans on company earnings.

"ADVANTAGES AND DISADVANTAGES OF AUTO FLEET LEASING: A COMPARISON OF COMPANY OWNERSHIP, SALESMAN OWNERSHIP, AND LEASING," pp. 28. Available free to executives by contacting The Foundation for Management Research, 121 West Adams street, Chicago 3, Illinois.

ATOMIC RESEARCH REPORT—1960. Just recently the Atomic Energy Commission has released a special report, entitled "Atomic Energy Research in the Life and Physical Sciences—1960." This report is devoted to basic research in the medical and biological fields; however, certain sections are given over to high energy physics, metallurgy, and controlled thermonuclear research.

In essence this report is concerned with basic research and the publication notes:

> Hardly any of the research findings constitutes an end to the creation of new knowledge in that particular line of investigation. This is the nature of basic research. Its revelations at any particular time raise more questions than they answer. We hope the report gives, however, a feel for the great volume and variety of study being carried on in both the life science and the physical science laboratories sponsored by the Atomic Energy Commission.
>
> In former years the AEC's report on research had been contained in the commission's regular summation to Congress. However, due to the increase in the size of that report the sections covering research were of necessity sketchy.

ATOMIC ENERGY RESEARCH IN THE LIFE AND PHYSICAL SCIENCES—1960. United States Atomic Energy Commission, pp. 175. Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price, $1.25. January, 1961.

STUDY OF RADIOACTIVE WASTE HANDLING. The Edison Electric Institute has recently published a study, entitled "Radioactive Waste Handling in the Nuclear Power Industry," which concludes that the radiation emitted from luminous dials and television tubes will probably be greater than the radiation produced by power plants in the next several decades.

The waste disposal techniques employed at six electric power stations are explored and it is concluded that the cost for such disposal will range from 1 to 5 per cent of the total cost of nuclear power. There is also the possibility that some of these waste products can be used, thus producing a financial credit rather than a loss. This publication contains a good bit of information which was presented to Congress by the Joint Committee on Atomic Energy in 1959.

RADIOACTIVE WASTE HANDLING IN THE NUCLEAR POWER INDUSTRY. Available from the Edison Electric Institute, 750 Third avenue, New York 17, New York. Price $2 for EEI member companies, $5 for nonmembers.

The March of Events

AEC Moves to Isolate Reactors

THE Atomic Energy Commission recently proposed that all nuclear power reactors built in the future be isolated as a precaution against a reactor explosion. The distances from the nearest densely populated area would range up to 17.7 miles for the biggest plants now envisaged.

The plan was outlined in a "notice of proposed guides" designed to help prospective applicants for reactor licenses. A spokesman said the proposed guide lines, which the AEC plans to put into effect if no serious objections are raised, "are consistent with what we have been doing all along, but this new action would put them on a formal written basis."

All of the three major civilian power reactors already built are well outside the isolation limits proposed for reactors of their particular power levels, it was said.

These are the 485,000-kilowatt Yankee reactor at Rowe, Massachusetts; the 180,000-kilowatt Dresden plant at Morris, Illinois; and the Shippingport, Pennsylvania, reactor which has a 231,000-kilowatt power level.

TVA Board Member Announced

PRESIDENT Kennedy last month announced he would appoint Aubrey J. Wagner, forty-nine, of Knoxville, Tennessee, veteran engineer and officer with the Tennessee Valley Authority, as a member of the TVA board of directors. He replaces Brooks Hays.

Kennedy also announced that the TVA board would submit a report by April 15th on "ways in which the lessons it has learned in the Tennessee valley may be exported abroad and applied to our great objective on human enhancement."

He said the TVA has demonstrated during its twenty-seven years of operation that it has the imagination and flexibility to grow with the times. Now, he said, it must prove that it can remain vigorous as it grows old. And, he added, it must not allow itself to relapse into an attitude of entrenched bureaucracy.

Wagner is a political independent.

California

Commissioners Start Terms

Two new commissioners have started their six-year terms on the state public utilities commission. They are George G. Grover, an attorney from Corona, and Frederick B. Holoboff, who resigned as

chief deputy city attorney of San Diego to accept the appointment by Governor Edmund G. Brown. Both are from southern California. They join as commissioners Everett C. McKeage, president, Peter E. Mitchell, who is president of the National Association of Railroad and Utilities Commissioners, and C. Lyn Fox.

Grover is thirty-eight and a native of Colorado who has been a resident of California since 1925. Holoboff, thirty-five, was born in Los Angeles and educated in Canada and also at Compton College.

Illinois

Electric Rate Increase Asked

AN application filed with the state commerce commission by Central Illinois Light Company sought rate increases to produce $3,250,000 in additional annual gross income. The proposed new schedule would provide a general increase in all service areas and to all classes of service.

"The need for rate relief," company spokesmen said, "is evidenced by the operating results of 1960, which show that income available for the share owners had decreased $675,672."

Kansas

Rate Base Act Introduced

A BILL introduced in the state legislature would make original cost of equipment, less depreciation, the basis of figuring utility company profits for purposes of rate making. The measure was sponsored by a state representative who unsuccessfully introduced a similar bill during the 1959 state legislative session. Several others joined him in offering the new bill.

The Southwestern Bell Telephone Company recently won a decision in Shawnee county district court giving it the right to use replacement cost of its equipment as a basis for figuring profits. This has been appealed to the state supreme court. The state corporation commission earlier had granted the company the right to charge 6.59 per cent of the original cost of its equipment, less depreciation, as an annual fund to pay shareholders and retire outstanding debt.

Line Extension Bill Introduced

A BILL introduced in the state house of representatives by its public utilities committee would provide that municipally owned power companies could not extend lines beyond city limits without approval of the state corporation commission. The bill would allow city-owned power companies, with commission approval, to connect to customers outside city limits or even extend lines to connect with another city or a network of cities and a common power source.

The proposed legislation does not refer to the controversial legislative subject of "overlapping certificates of convenience and necessity," involving a private power company and a rural electric co-operative.

Kentucky

Electric Plant Sale Approved

IN a move which cleared the way for the Paducah Electric Plant Board to proceed immediately with plans for the sale of $7,050,000 in revenue bonds to pay for the system, directors of the Ken-

tucky Utilities Company approved sale of the company's Paducah electric distribution system to the city.

Paducah voters authorized such a bond issue by an overwhelming margin at the November general election. The mayor said Paducah hopes to sell the bonds and close the transaction within three months.

Louisiana

FPC Suspends Gas Rate Increase

THE Federal Power Commission has suspended until June 15th a $4,640,000-a-year wholesale natural gas increase asked by United Gas Pipe Line Company of Shreveport, Louisiana. The FPC said the rate increase, amounting to 3.7 per cent, "may be unjust, unreasonable, unduly discriminatory, and preferential, or otherwise unlawful."

The rate increase can go into effect—subject to refund—after June 15th.

The higher rates would affect about fifty utility companies in Arkansas, Florida, Louisiana, Mississippi, and Texas.

Massachusetts

Plant Completes Test Run

SUCCESSFUL completion of a 500-hour test period of operations at the Yankee Atomic Electric Company's plant in Rowe, Massachusetts, was announced last month. The reactor for the Yankee plant is the largest yet designed and developed by Westinghouse Electric Corporation's atomic power department.

This test run of 500 hours' duration at full licensed power of 110 megawatts, marked the final phase of the plant's start-up testing program. The run was started January 17th and continued around the clock until completion at noon on February 8th. A spokesman for Yankee Atomic reported that the entire plant operated satisfactorily.

The Yankee plant, New England's first full-scale atomic power station, will be limited to 110,000 kilowatts of electrical output until approval is received from the Atomic Energy Commission for an amendment to the Yankee license to permit operations at the designed capacity of the plant, 136,000 kilowatts.

New York

Niagara Power Starts Flowing

ELECTRICITY in salable quantity began flowing from the $720 million New York State Power Authority's hydroelectric project on February 10th for the first time. Governor Rockefeller flipped a switch at the Niagara University Student Center that symbolically started power production. This meant that the first of thirteen 150,000-kilowatt generators in the new Robert Moses generating plant had officially gone into service. It had been producing current for more than a week while undergoing tests.

The other generators are scheduled to go into service at the rate of one every five weeks. When in full operation in 1963, the 2,190,000-kilowatt Niagara project will be the largest hydroelectric producer outside the Soviet Union.

Pennsylvania

Gas Rate Increase Suspended

THE state public utility commission has suspended until August 1st investigation of an estimated annual rate increase of $3,243,000 proposed by Peoples Natural Gas Company, Pittsburgh, which serves 261,380 customers in 13 counties in the western part of the state.

The commission also held in abeyance at the company's request another increase of $1,103,800 sought to offset an increase in the price of gas bought from Hope Natural Gas Company, one of the company's major wholesale suppliers.

The cost-of-gas increase was voluntarily postponed to May 1st after the company was notified that the Federal Power Commission had suspended a request by Hope Natural to raise its price to Peoples. The Hope increase will become effective May 1st, subject to refund, pending a final order. Peoples seeks to recoup the higher gas cost through a surcharge of 1.1 cents per thousand cubic feet on all gas used over the first thousand per month.

Texas

New Gas Tax Proposed

A NEW gas tax designed to raise $30 million a year was proposed in the state house recently by Representative Bob Eckhardt of Houston. Eckhardt's tax would be on "dedicated reserve producers," as defined by his bill from the "severance beneficiary producers." The Eckhardt tax would be 1½ cents per thousand cubic feet of gas produced.

Eckhardt defined a "dedicated reserve producer" as the first purchaser of the gas after it left the well. The Texas severance beneficiary tax, which has been held unconstitutional by the third court of civil appeals, taxes the gas from the hole to the pipeline outlet, which may be in some other state, such as New York. The appeals court held that the severance beneficiary tax violated interstate commerce.

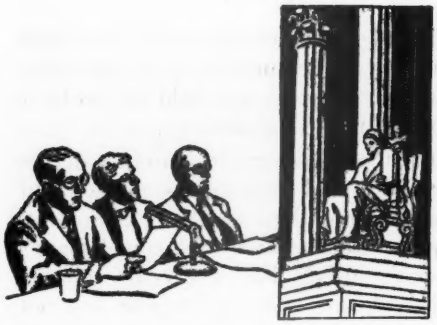
West Virginia

Utility Law Revision Opposed

BILLS proposing changes in state utility regulatory laws were opposed recently at hearings conducted separately by the state senate and house judiciary committees.

Representatives of public utility companies spoke against a senate bill to prevent such utilities from putting a proposed rate increase into effect until the state public service commission had reached a final decision on the case. Under present West Virginia law, the rates can go into effect under bond after a period of four months if the commission has not yet reached a decision by that time.

The house hearing was devoted to two bills. One would increase the membership of the commission from three to five and change the system of staggered six-year terms to a method of appointing all members at the same time. The other measure would increase from 120 days to eleven months the time that must elapse before rates can go into effect under bond if the commission has not yet reached a decision.



Progress of Regulation

Trends and Topics

Exemption of Telephone Pole Attachment Contract from Commission Regulation

COMMISSION regulation is limited to public utility operations, even though other activities may be carried on by a public utility corporation. Merchandising operations, for example, have been exempted. In New York several court and commission decisions deal with nonutility activities of telephone companies. Basic theories discussed in the Solomon case (12 PUR3d 127), relating to advertising in directories, have now been applied in the most recent case dealing with the leasing of pole space to antenna television companies.

"Over the Line" Limitation

In the Solomon case (12 PUR3d 127) a state court dismissed a proceeding to compel the commission to exercise jurisdiction over rates for classified directory listings and advertisements. A telephone company is required by statute to file charges for service "over its line." Such listings and advertisements, said the court, do not constitute service "over the line" of the telephone company. This ruling seems to be in accordance with decisions in other states to the effect that advertising in directories does not come within the public utility phase of telephone company operations, as, for example, in Florida (87 PUR NS 87).

The New York court, in the Solomon case, said that the commission's interest in advertising revenues is seen to be a "limited one," directed principally to the effect which such revenues may have upon rates.

Rulings on Use of Poles

A New York court, in the Ceracche Television Corporation case (36 PUR3d 278), has upheld a commission decision (28 PUR3d 410) that it had no jurisdiction over a telephone company's rates and practices under a pole attachment contract. The business of picking off-the-air standard broadcasts of commercial television stations and by amplification transmitting

them over wires on telephone poles directly to household patrons was held not to be telephonic communication subject to the jurisdiction of the commission. Rental of telephone space for such purposes was held not to be a part of the public service performed by the telephone company.

The complainant had argued that since the poles were by statutory definition a part of the company's "telephone line," and since the commission had regulatory jurisdiction over all telephone corporations and their equipment, the poles and the use of the poles by the attachment of the complainant's facilities were subject to the commission's jurisdiction. The court rejected this argument, stating that rental of the pole space by the company was not part of the public service performed by the company in the business of telephonic communication. Such a nonutility activity of a telephone company is not subject to regulation by the commission.

The commission, in one case, did assert limited jurisdiction over the use of a telephone company's poles by a community antenna television system. The company had permitted attachments by others engaged in the same business, and the commission found that under the circumstances the company was guilty of discrimination in refusing to permit Antenna Systems Corporation to attach its wires to the company's poles. The commission said that the conclusion was inescapable that if the telephone company itself had engaged in a similar undertaking it would have been a proper adjunct of its telephone service subject to complete regulation. The company in the past, instead of furnishing all facilities which it legally could do, saw fit to permit others to engage in the rendering of such service by the use of some of its facilities. The commission said that having done so it could not discriminate. Furnishing service of this type was said to be a link in the expanding art in which the company was basically engaged. The test as to whether or not the commission had jurisdiction, it was said, was whether the service rendered had an impact upon rates or whether it had any real connection with the rendering of what is called telephone service (25 PUR3d 316).

The court, in the Ceracche case, said, however, that this commission decision involved adoption of the so-called "limited" jurisdiction theory as evolved by the decision in the Solomon case, but that case antedated a later court decision in the National Merchandising case (29 PUR3d 383) clarifying the "limited" jurisdiction theory. The court, therefore, did not consider it determinative of the present issues.

Public Utility Status of Emergency Alarm Service

A state court, in the Gamewell Company case (29 PUR3d 539), had upheld a commission decision (21 PUR3d 384), determining that the business of furnishing telephone systems for reporting of emergency alarms was properly subject to regulation. The system provided a means of communication by voice, over wires furnished by the telephone company and using the public streets. It was so joined to the company's general exchange system as to provide wide-scale communication over considerable distances and, in prin-

ciple at least, so as to offer access to, and permit access from, any telephone —all within the common concept of telephone service. The clear and relatively simple issue, said the court, was whether the activity contemplated by the tariff offering constituted the "business of affording telephonic communication for hire."

Review of Current Cases

"End Use" Properly Considered by FPC in Denying Certificate to Transport Gas

THE U. S. Supreme Court, reversing a federal appeals court, held that the Federal Power Commission acted within its delegated authority in considering "end use" of gas in a certificate proceeding. In an effort to obtain a supply of gas for use as boiler fuel in New York city, Consolidated Edison Company arranged to purchase gas directly from producers in Texas at 19¼ cents per Mcf and contracted with Transcontinental Gas Pipe Line Corporation to transport the gas. Along with a major expansion program, Transco sought a certificate from the Federal Power Commission to conduct this transportation service, known as X-20 service. The commission denied authority to construct pipeline facilities to carry the gas on the grounds that the use of gas as boiler fuel is an inferior use and, further, that the price was too high.

There was no substantial challenge to Transco's proof that its application met all the conventional tests—adequate gas reserves, pipeline facilities, and market for the gas. The staff of the commission argued that the X-20 service would adversely affect the public interest. It was urged as "policy" arguments that the use of gas as boiler fuel is an inferior use from the standpoint of conserving a valuable natural resource, that the authorization of direct sales to major industrial users would pre-empt pipeline capacity and gas reserves to the detriment of domestic users, and that the effect of this sale would be a general rise in field prices. Consolidated Edison, on the other hand, contended that the use of this gas in its boilers would reduce air pollution in New York city.

The commission regarded the staff's policy considerations as cognizable in a § 7 proceeding under the Natural Gas Act. It found the idea of ameliorating air pollution "an attractive one" but concluded that "more weighty considerations compel the denial of the grant." The federal appeals court for the third circuit overturned the commission's decision, holding that the policy considerations were outside the scope of a § 7 proceeding. The court relied on § 1(b) of the act, which limits jurisdiction to sales for resale in interstate commerce. It suggested, also, that the commission had not given adequate weight to the air pollution factor.

Conservation Power

Referring to the legislative history of the statute and the commission's usage over the years, the Supreme Court thought the commission realized the distinction between its power to consider the conservation factor as an element to be weighed in a § 7 proceeding, and a complete allocation power which it does not

have and has not claimed. When Congress enacted the Natural Gas Act, it intended to protect consumers against exploitation at the hands of natural gas companies, and to that end it meant to enact a comprehensive and effective regulatory scheme. Comprehensive federal regulation, however, was not desired, and much authority was reserved to the states. Nevertheless, no important aspect of the field was meant to be left unregulated. In a borderline case where congressional authority is not explicit and state authority cannot practicably regulate a given area, then federal authority governs, the court declared.

In the instant case, the dispute was over the economic waste of gas which had been committed to transportation in interstate commerce outside the producing state. It is questionable whether any state can be expected to take the initiative in enforcing economic conservation of gas committed to interstate commerce. Therefore, it appeared to the court that, consistent with the congressional purpose of leaving no "attractive gap" in regulation, the "end-use" factor was properly considered by the commission.

Price Effect Considered

The court also sustained the commission's second objection to certification based on its forecast that direct sales of gas at unregulated prices above those allowed in sales for resale would drive up field prices both for direct sales and for sales for resale. Transco and Consolidated Edison, citing the jurisdictional limitations of § 1(b), contended that this policy consideration merely masked the commission's true purpose of completely barring direct sales and forcing all gas transactions into regulated channels. Any such flat rule, if applied, would be beyond the commission's bounds, the court agreed. But it did not appear that the commission had, in fact, propounded an absolute rule in this case. In the administrative opinion there was recurrent reference to the absence of any one controlling factor.

The question for consideration then was whether in a § 7 proceeding the commission can consider the effect which an inflated price in one sale will have on future field prices. This question was answered in the CATCO decision (29 PUR3d 70) in favor of commission jurisdiction. But it was objected that the CATCO price involved a sale for resale independently within the commission's jurisdiction, while the sale in the instant case was a direct and nonjurisdictional one. The very nature of this problem, said the court, entailing as it does considerations that overstep the bounds of any one state, illustrates the improbability that state commissions will attempt to deal with it, and such considerations are uniquely fitted for federal scrutiny. Since Congress intended to impose a comprehensive regulatory system on the transportation, production, and sale of gas, and since the problem is not one with which state commissions can be expected to deal, the conclusion is irresistible that Congress desired regulation by federal authority rather than nonregulation.

Finally, it was urged that insufficient weight was afforded the evidence concerning air pollution. However, no definite relation was shown between injury to health and the stack emissions at Consolidated Edison's station. Nor was it shown that other methods could not be used to solve the pollution problem. Consequently, the court could not say that the commission acted irrationally in concluding that Con Ed's proof was insufficient.

Broad Implications Denied

The court pointed out that it did not

hold that sales to pipelines are generally more in accord with the public interest than other sales. Nor did it authorize the elimination of direct sales under appropriate circumstances, nor the denial of a certificate to any arbitrarily chosen group of purchasers. "All we hold is that the commission did not abuse its discretion in considering, among other factors, those of end use, pre-emption of pipeline facilities and price in deciding that the public convenience and necessity did not require the issuance of the certificate requested."

Three justices dissented in part, observing that "the commission has quite evidently asserted a power to frown upon any transaction which does not take the form of a sale to a pipeline for resale."

Federal Power Commission et al. v. Transcontinental Gas Pipe Line Corp. Nos. 45, 46, January 23, 1961, reversing Consolidated Edison Co. of New York v. Federal Power Commission (CA3d 1959) 31 PUR3d 332, 271 F2d 942.

Commission Properly Refused to Equate Depreciation Period to REA Loan Term

THE Illinois supreme court upheld a judgment affirming a commission order authorizing a telephone company to increase its rates, the increase applicable to all but two of the exchanges. The two exchanges excluded from the increase had not yet converted to dial operation.

It had been contended that the commission order had not taken into consideration the possible value of retired plant. The appellants also sought to relate the depreciation period to the term of an REA loan, arguing that if the property were depreciated over such 35-year period, the result would be a composite rate of 2.86 per cent instead of 3.6 per cent allowed by the commission.

The commission, in its order, had referred to one of its general orders which provided for the computation of depreciable charges of a telephone utility by the application of percentage rates considered applicable to the original cost of each class of depreciable telephone plant. These percentage rates were to be based on the estimated service value and estimated service lives developed by the company's history and experience and such engineering and other information as was available.

The rule, in defining "service value," pointed out that this meant the difference between the original cost and (1) the salvage value for station apparatus, and (2) the net salvage for other telephone plant.

The commission had concluded that the company's annual composite rate of 3.6 per cent was reasonable for rate-making purposes. The court held that the commission had a right to consider the provisions of its general order even though the order had not been formally introduced in evidence. Such orders are presumed to be known and all parties have equal access and knowledge of them. The commission had properly concluded, based upon its experience, that salvage value was a very minor factor in the operation of the company, thus, not completely ignoring the possibility of salvage, as contended by the appellants.

Similarly, the court found no basis for equating the depreciation with the term of the REA loan. The arrangement for financing did not require the depreciation period to follow such term of years, the court said. As a matter of fact, the REA requires 18 per cent of the annual income to be used for maintenance, and either to

be spent on the plant or put in the cash reserve account. Actual maintenance expense under the record allowed by the commission in fixing the rate was approximately $10,000 less than the REA requirement. Under the mortgage, the company was required to reserve that amount or difference, thus further reducing the net return available to the shareholders.

Officers' Salaries

Three of the company's officers were paid combined salaries of $62,400 a year. Each of the three had a broad base of utility experience. Collectively, they performed all managerial and supervisory duties. There was no engineer, auditor, general manager, or personnel supervisor or similar supervisory employee, but only maintenance help, clerks, and repairmen. In effect, the three operated and managed the business, and even provided all the legal services required in connection with the operation without extra charge. The commission's conclusion that the salaries were reasonable was not disturbed by the court.

Inclusion of Nondial Exchanges

The company had included the plant, revenues, and expenses of two nondial exchanges but had not sought a rate increase for these exchanges. The mere fact that the subscribers on the two nondial exchanges were to be charged at the old rates and all others at the increased rates did not render the commission's rate order discriminatory, held the court. The two nondial exchanges were integral parts of the system and the inclusion of the property, income, and expenses was necessary in determining the fair value rate base. The court noted that if the commission were to follow the appellant's contentions, the cost of plant and income and expenses would be allocated to each exchange, and the conceivable result would be a different rate for each of the company's exchanges.

Return Allowance

The increased rates would produce a return of 4.04 per cent on the fair value rate base, which the commission had found to be reasonable. The court noted that the company had sought no allowance for going concern value, asked for nothing for meeting the expenses of unitization of its plant in accordance with a commission general order, sought no allowance for expense in the rate case, and took no allowance for extraordinary expense of storm damage and amortization. These omissions were beneficial to the consumers. *Village of Milford et al. v. Illinois Commerce Commission et al. 170 NE2d 576.*

Attrition and Local Tax Burden Recognized In Gas Rate Case

THE West Virginia commission allowed Cumberland and Allegheny Gas Company a rate of return of 6.4 per cent on a net original cost rate base. An allowance for attrition was granted to offset projected increased costs of installing new plant at a higher per customer cost than the per customer investment during the 1958-59 test year. The company distributes natural gas at retail and wholesale in West Virginia and Maryland and is a wholly owned subsidiary of the Columbia Gas System.

Cumberland and Allegheny proposed an original cost rate base except as to distribution plant. The rate base for such

plant was developed by the company by trending the original cost to current values, applying trend factors to property items for each year since the property was installed, and then averaging the result with the original cost. The commission decided on net original cost, however, following The Manufacturers Light and Heat Company case (34 PUR3d 132). Production property was allocated 100 per cent to commodity.

Tax and Expense Items

In arriving at cost of service, the commission used the latest available tax saving figures resulting from the company's consolidated tax return with other members of the Columbia Gas System. Unless the latest actual tax saving is unreasonably high or unreasonably low, said the commission, it is a satisfactory percentage to use as it reflects the latest company operation and can be presumed most likely to continue. A surcharge was authorized to be applied to the bills of local customers to cover gross revenue taxes imposed by local governments.

A post test period wage increase was included in cost of service since the amount was known and measurable. Depreciation, depletion, and amortization expenses applicable to completed construction on the plant balances were computed at the end of each month of the test period, rather than at the beginning and end of the test period as the company proposed.

Cumberland and Allegheny was directed to refund excess collections, over the rates here authorized, derived from substantially higher rates placed in effect according to law in August, 1960. *Re Cumberland & Allegheny Gas Co. Case No. 5085, December 30, 1960.*

Customer Pro Ration of Municipal Occupation Tax Upheld

THE Nebraska supreme court has affirmed a commission order authorizing a telephone company to impose an occupation tax levied by a city pro rata against subscribers. The commission was held to have the power to enter orders permitting a utility to amend and revise its rules and regulations so as to pass such occupation tax on to subscribers within a city levying the tax.

The city had argued that the commission's order was unlawfully discriminatory against its residents. Not so, answered the court, because the discrimination forbidden by statute applied to rates between customers of the same class in the territory.

Customers residing in subdivisions of the same territory served by the utility where an annual percentage of the company's gross receipts is exacted are not in the same class as patrons who live in a municipality where such percentage is exacted. It would be unjust to spread the burden of the annual franchise payment over the whole division. It should be borne by the company's consumers residing within the city since the city alone receives the advantage of the annual payment. It is immaterial in what form the pro rata share of the consumer's payment of the annual payment be made to the city. No statute had been enacted which prescribes the method of allocating such an item. *City of Scottsbluff v. United Teleph Co. of the West, 106 NW2d 12.*

Full Crew Statute Limited to Switching Operations

THE Wisconsin supreme court has affirmed the dismissal of a complaint against a railroad alleging violation of the full crew statute. The statute prohibited switching operations with less than a full train crew consisting of one engineer, one fireman, one conductor, and two helpers. The railroad had been charged with a violation of the statute because it had not had two helpers aboard when it had set out and picked up certain trains.

Such a statute, pointed out the court, had to be strictly construed, with questions of doubt resolved in favor of the railroad, since it was penal in nature and in derogation of the common law. In the court below, there had been a dispute as to the meaning of the words "switching" and "helper."

The state had contended that the ordinary or dictionary definitions of each word should be used. Such an argument would defeat itself, answered the court, since, if a helper is construed as one who could help, aid, or relieve, there was nothing in the record to show that the baggage man, baggage helper, or train porter could not have helped, aided, or relieved in the pickup and set out operations. The word "helper," as used in the statute, was a technical one and had to be given the meaning ascribed to it by people in the railroad business.

As used in the railroad business, the word "helper" is not applied to any member of a road crew but is used only with respect to switching crews. Therefore, the full crew statute was limited to switching operations by train crews of which helpers were members. Set out and pickups could not be construed as switching operations. *Wisconsin v. Minneapolis, St. P. & S. Ste. M. R. Co. 106 NW2d 320.*

Per Cent of Condition Important in Appraisal Of Reproduction Cost

THE Indiana commission, in granting a gas company a rate increase which would produce a return of 6 per cent on the fair value rate base, pointed out that the per cent of condition estimate applied to cost of reproduction new figures, for the purpose of helping the commission arrive at a present fair value estimate of plant, should state a lower per cent of condition resulting in a higher depreciation allowance than the per cent condition estimate as applied to original cost figures.

Yet, in the instant case, the commission found that the per cent of condition estimate applied to reproduction cost new was higher than the one applicable to original cost. The commission noted that if it were to take an inflated cost for an item and rate it at a higher percentage of condition than was justified so that there was inadequate deduction made for depreciation, it would have compounded the effective errors which might have been made in arriving at the inflated cost figure.

The commission concluded that one of the most serious deficiencies of the company's case was a failure to sustain the burden of showing that a proper determination had been made of depreciation of the plant, giving weighted effect to physical condition, age, and probable life expectancy and obsolescence. For current cost and estimated cost of reproduction evidence to be given much weight,

the commission said, it has to be accompanied by a thorough depreciation study.

Construction Work in Progress

The company had claimed credit for construction work in progress, which sum partly represented a portion of an underground storage field. Although the evidence showed that the underground field was not yet fully developed and that a very small part of the ultimate cost had been expended, and that it had not yet connected to the system, the commission allowed the company's claim, since a group of customers were being served.

The commission found that property rented to others, dismantled and abandoned property, contributions in aid of construction, and property never put into service but held for future use should all be deducted from the booked original cost of plant depreciated.

Cash Working Capital

The cash working capital allowance was reduced to reflect tax accruals and customer deposits. Rate case expense was directed to be amortized over a period of not less than five years. The commission refused to approve an escalation clause which would have permitted an automatic increase in rates charged to reimburse the company for increases in the cost of purchased gas.

Return Variables

In determining the rate of return, the commission made two points: (1) The decisions of the court that a public utility is entitled to "fair return" upon the "fair value" of its property; and (2) the distinction between "fair rate of return" and "fair return based upon fair value." Under the law of Indiana, the commission said, it was concerned with two variables, the "fair return" and the "fair value." Therefore, either figure could be high and the other low and the net return to the company would still result in a fair return in conformity with the legal prescription. *Re Central Indiana Gas Co. No. 28588, December 9, 1960.*

Stock Dividend Involving Write-up Disapproved

A 25 per cent stock dividend proposed by a telephone company was disapproved by the Ohio commission in view of an unrealized write-up of property value as a partial basis for the proposal. To effect the stock dividend, the applicant sought permission to make a transfer from reserved surplus to stated capital. Most of the sum to be transferred derived from the acquisition of another company in 1949 and represented, in part, an unrealized write-up.

The commission indicated that a part of the write-up, representing a deficiency in the reserve for depreciation, should be transferred from reserved surplus to depreciation reserve. It appeared that the remainder of the write-up was realized through depreciation charges, net salvage, and retirements of nondepreciable property.

Such write-up, of course, could be properly transferred to stated capital only to the extent that it was realized.

Alternative Basis for Dividend

While the application could not be granted as requested, the commission observed that it would be inclined to entertain favorably another application propos-

ing (1) a lesser dividend to the extent of the amount properly available in the reserved surplus account, or (2) a dividend of the magnitude originally proposed, but based on the amount properly available in the reserved surplus account and the balance from either or both the earned surplus account and the premium on stock account. *Re Northern Ohio Teleph. Co. No. 28,733, December 23, 1960.*

Conditions Imposed upon Exemption of Holding Company From Holding Company Act Requirements

THE Securities and Exchange Commission conditionally exempted Electric Bond and Share Company as a holding company from the Holding Company Act, and modified a 1952 divestment order (95 PUR NS 259), by permitting it to retain its holdings of common stock of United Gas Corporation. This interest would be reduced to 3.88 per cent of the total outstanding stock as a condition to the modification. It concluded that under all the conditions upon which the exemption order would be predicated, Bond and Share's relationship with the United Gas and other former associate companies would be sufficiently restricted to make unnecessary any adverse finding under the "unless and except" clause of § 3(a)(5) of the Holding Company Act.

The commission considered whether the retention of the smaller amount of stock was precluded under § 10(c)(2) of the act. Bond and Share argued that the section did not present any obstacle to the retention of the stock in view of its program to become a registered investment company. It pointed to three cases in which the commission had permitted holding companies which were transforming themselves into investment companies to continue to hold up to 5 per cent of the stock of public utility companies, which had been acquired in the process of system reorganization under the act.

The commission acknowledged that Bond and Share has undertaken successive steps of reduction of stock ownership and elimination of holding company activities of the type which the act was designed to achieve. It concluded that there is no valid distinction, in so far as § 10(c)(2) is concerned, between the instant case and the three earlier cases.

It did not believe that § 10(c)(2) was designed to preclude the present situation, saying that under these circumstances this section would not require the disposition of all of Bond and Share's holdings of United Gas stock.

Intercorporate Relationship

The commission considered various aspects of the relationship in existence between Bond and Share and United Gas to determine whether there is liable to be an absence of arm's-length dealing within the meaning of the act. It pointed to the continued holdings of voting stock of United Gas, Electric Bond and Share's representation on the board of directors of United Gas, its equal interest with the latter company in a research company, and the performance of services by Ebasco, a subsidiary service company, for United Gas.

In so far as the stockholding was concerned the commission pointed to the proposed reduction of the stockholding, and found that the remaining ownership in United Gas would not preclude the grant of the exemption. Bond and Share agreed that its president would resign from the

United Gas board of directors, and that no director, officer, or employee of Bond and Share or any of its subsidiaries would serve as a director of United Gas in the future. Consequently, common directorship would not preclude the exemption.

Bond and Share and United Gas were still engaged in a joint venture with each company owning 50 per cent of a concern engaged in petrochemical research and development. Earlier United Gas had had an unsuccessful experience in another petrochemical venture. The commission believed that its decision to share its new risk with another company that had available funds and managerial experience and had already participated, with the commission's approval, with it in petrochemical research activities could not be viewed as having been inconsistent with the furtherance of United Gas' best interest.

The commission concluded that the circumstances surrounding establishment of the research company did not create the likelihood of such an absence of arm's-length bargaining as to give rise to an affiliated relationship.

The holding company through a wholly owned service company did perform services for certain former domestic subsidiary public utility clients. This did not create an obstacle in this case, however, since the commission imposed such conditions upon the exemption as to prevent or modify practices which might tend toward or lead to an absence of arm's-length dealing.

In view of the conditions, the commission believed that the holding company would not stand in such relation to any of its former domestic subsidiary public utility companies, by reason of services performed through the service company subsidiary, as to require that the holding company be deemed to be an affiliate of any of such public utility companies. *Re Electric Bond & Share Co. File Nos. 31-627, 70-1806, Release No. 14326, December 6, 1960.*

Bus Certificate Granted by Commission Held Inoperative in City-annexed Area

THE Virginia supreme court affirmed a declaratory judgment of a lower court that a bus company had no right, against the wishes of the city of Norfolk, to continue operating in territory newly annexed by the city. For a number of years the bus company had operated between Norfolk and points in Princess Anne county pursuant to certificates granted by the state commission. Shortly after the annexation, the city notified the company to cease transporting passengers between the former city limits and points within the newly annexed territory. The company urged that it was entitled to continue operations in the annexed territory under authority of certificates issued by the state corporation commission.

Intracity Jurisdiction

Under the Virginia law, the commission has no power to issue a certificate authorizing intracity transportation. The company argued that this limitation relates to the future and would not affect a certificate issued in the past and prior to annexation. The court disagreed with this interpretation. This, said the court, would be tantamount to saying that while the commission cannot issue a certificate authorizing intracity transportation on the date of the certificate, it can issue one which authorizes intracity transportation at a later date. The statutes remove intra-

city transportation from the jurisdiction of the commission. When the annexation in this case became effective, the commission lost its power to regulate the company's operations in the annexed territory. Moreover, the dispute was a matter for judicial determination, as the lower court had held, and not one for the commission to decide.

The court pointed out that a statute providing that local authorities may not prohibit carriers from using city streets along an established route where they are authorized by law to do so, was not intended to give a bus company rights superior to those granted by its certificate. It also indicated that the fact that a bus company's certificate becomes inoperative in city-annexed territory does not constitute a revocation, alteration, or amendment in contravention of a statute dealing with suspension, revocation, or amendment by orders of the commission. And when the certificate becomes inoperative in the annexed territory, the city is free to regulate and control intracity bus transportation within its limits. *Carolina Coach Co. v. City of Norfolk et al. 117 SE2d 131.*

State Certificated Taxi Service Held Subject to Local Certification

THE Virginia supreme court upheld a Norfolk county ordinance requiring taxicab operators to obtain certificate authority from the county board in order to operate within the county. Two taxicab operators, holding certificates from the state commission to operate on the public highways of the state, contended that the ordinance was invalid as to them.

The court found ample statutory authority for the county ordinance, giving the county control over taxicabs operating within its jurisdiction. Attention was called to the established principle that the right to use streets as a carrier for hire is a privilege, not an inherent right, which may be granted or refused by local authorities in the exercise of the police power. *Baker et al. v. Hodges, 117 SE2d 57.*

Commission Erred in Imposing Uniform Mileage Rates

THE North Carolina supreme court affirmed a reversal of a commission order imposing uniform motor common carrier rates for the transportation of petroleum products. The court pointed out that in proceedings where the commission is the complainant, the prosecutor, and the judge, as in the instant case, the court is duty bound to review the administrative decision to make sure that the rights of all parties are protected.

Although the statute made any rate that created an unjust discrimination or undue or unreasonable advantage unlawful, the evidence showed justification for a disparity in rates between specific locals. For example, the city of Wilmington had advantages over the city of Thrift. These arose from location, accessibility to sea lanes, volume of business, and cost of movement. The cost of operation over steep and crooked mountain roads where snow and ice were not infrequent handicaps was more than in the coastal area. Wilmington, therefore, had a natural advantage over Thrift.

Recognizing such advantages by provision for a lower per mile rate is not unjust discrimination, the court held. Failure to recognize them may be unjust discrimination.

The commission had based the uniform rates upon mileage alone. The evidence was held insufficient to show the new rates just and reasonable. Although the existing rate structure contained some inequities, it had been in effect for a substantial period and had never been protested by shipper or carrier, or the commission, before the investigation had been commenced. The case was remanded to the court with directions that the commission conduct further hearings. *North Carolina ex rel. Utilities Commission v. North Carolina Motor Carriers Asso. et al. 117 SE2d 271.*

Electric Company Not Required to Serve Customer of Co-operative

ALTHOUGH the North Carolina commission indicated that an applicant may choose which of two readily available electric utility services it will take, no sufficient reason was shown to justify the commission in requiring an electric company to serve an applicant in place of an electric co-operative which was already providing him with adequate and dependable service. The application for company service was therefore denied.

Both the company and the co-operative could readily provide service at the time of the application in this case. At a time, however, when company service was not available the customer took service from the co-operative. Later, upon application to the company for service, the company declined, pointing to a contractual arrangement with the co-operative whereby one would not serve a customer being served by the other. While the commission observed that it was highly doubtful that the company could by contract limit its service obligations, it felt that the facts in this case did not require a determination of the contractual rights. The commission held, simply, that no compelling public interest was shown to support the application for service. *Lawson et al. v. Duke Power Co. Docket No. E-7, Sub 48, January 10, 1961.*

Eligibility for Electric Service on Conjunctional Billing Basis

THE New York commission held that Consolidated Edison Company properly decided that American Broadcasting-Paramount Theatres, Inc., was not entitled to receive electricity on a conjunctional billing basis at nine buildings in Manhattan. The consumer was neither the record owner nor lessee of public record of these buildings on the date specified in the company's tariff covering electric service on a conjunctional billing basis.

The tariff provides for service under the provisions of the intercommunications buildings rider to a customer who was taking service under such a rider on May 31, 1959, and only as to such buildings which were included in the customer's rider agreement on that date. The tariff goes on to state that it is further understood and agreed that when a group of buildings enumerated are under a common ownership or a leasehold for not less than a five-year term, of public record in

the name of the customer, the electric energy supplied to such buildings will be added for the purpose of determining the amount of the bill.

On May 31, 1959, American Broadcasting-Paramount Theatres, Inc., was neither the owner nor the lessee of public record of the premises in question, although it had been receiving the benefits of conjunctional billing at that time. The commission held, however, that the fact that it had been receiving such benefits at that time was immaterial. It said that Consolidated Edison may not be estopped from enforcing its tariff regulation even though that regulation may have been violated in the past.

According to the commission, the complaint was comparable to complaints in another case in which it had held that equitable ownership of the property in question as of May 31, 1959, was not sufficient to render the complainants eligible for conjunctional billing. It therefore concluded that Consolidated Edison correctly interpreted its tariff provision, and that the complaint should be dismissed. *Re Consolidated Edison Co. of New York, Inc. Cases 18011, 18012, January 17, 1961.*

Transit Rate Increase Takes Account of Declining Industry And No Need for New Capital

THE Maryland commission granted the Baltimore Transit Company only a part of a requested rate increase of 28 per cent. A flat fare of 25 cents for adults was authorized, along with a students' and children's fare of 15 cents. The company sought a 30-cent cash fare and a 27½-cent token fare for adults, and a 20-cent cash fare for students and children. It pointed to increasing operating costs, particularly a new wage increase, and called attention to the heavy tax burden imposed on the company amounting to 10 per cent of revenues. This is twice the ordinary tax load carried by the larger privately owned transit companies in the country. However, noting that there are but few transit companies anywhere in the United States with fares in excess of 25 cents, the commission thought there was little economic justification for a higher fare.

Student Fares

The commission rejected the argument that some families may not be able to afford a higher fare than the existing 10 cents for students and children. It is an argument to which a regulatory body can give only limited recognition. The commission noted that in every jurisdiction of the state, other than Baltimore city, school children are provided transportation to and from school by publicly financed transportation. It could find no justification in requiring this highly taxed, privately owned company, or its adult riders, to bear the heavy burden of the cost of students' and children's transportation.

Return Allowance

After adjustments were made to proposed operating and rate base figures, it appeared that the authorized rates would produce a rate of return of 6 per cent. The commission observed that the company is engaged in a declining industry. Since it suffers a constant shrinkage in revenues and in the value of its property used in serving the public, it will have little or no need to attract new capital in

the money market. Furthermore, said the commission, the owners benefit from the company's practice of reacquiring debentures at a substantial discount. For these reasons 6 per cent was considered just.

Valuation and Amortization

A 1958 net book value rate base was brought down to June 30, 1960, representing the "fair and reasonable value" of the company's properties. The commission indicated that it does not accept as fair value for rate-making purposes the reproduction cost, trended original cost, or other methods used to inflate book values.

The book amortization figure presented by the company was sharply reduced by eliminating amortization of rail and trackless trolley lines which had already been abandoned and were no longer used or useful in providing service to the public.

Nonoperating Income and Taxes

A considerable item of nonoperating income, comprised of profit on the reacquisition of debentures and other items such as discounts on bills and interest on securities, was not included in revenue for rate-making purposes. All cost involved in the reacquisition were charged against the profit on the transaction, including any taxes that would be paid on such profit. To the extent that indebtedness is reduced, said the commission, stockholders' equity is enhanced, and if management concludes that it is advantageous to reduce indebtedness by reacquiring debentures, realizing a profit in the process, it should take into account all costs involved. Therefore, both nonoperating income and the taxes attributable thereto were excluded. *Re Baltimore Transit Co. Case No. 5681, Order No. 54532, January 6, 1961.*

Other Recent Rulings

Navigation Protection. The Federal Power Commission refused to delete from a power project license certain provisions requiring the licensees to furnish to the United States, free of charge, such lands, rights of way, and power as may be needed to safeguard navigation interests, since the provisions were appropriate to the purpose and in accord with § 11 of the Federal Power Act. *Re Portland General Electric Co. et al. Project No. 2233, December 2, 1960.*

Officers' Salaries High. Although the Wisconsin commission considered officer-stockholder salaries of a small telephone company excessive when related to the number of stations served, the commission would not substitute its judgment for that of the company, though an appreciable part of payroll expense was required to be allocated to capital accounts for rate-making purposes. *Re Farmers & Merchants Teleph. Co. 2-U-5421, December 9, 1960.*

Rate Discrimination. The U. S. court of appeals pointed out that, under the Interstate Commerce Act, the intricacies of a private contract cannot be permitted to result in rate discrimination, actual or potential. *Empire Petroleum Co. v. Sinclair Pipeline Co. 282 F2d 913.*

Sherman Antitrust Act. The U. S. district court held that the awarding of a contract by railroads to a transfer agent on any basis the railroads choose rather

than giving the contract to a competitive lower bidder is not a violation of the Sherman Antitrust Act since Congress did not intend to make the act a lowest responsible bidder statute. *Parmelee Transp. Co. v. Keeshin et al. 186 F Supp 533.*

Water Meters. The Wyoming commission directed a municipal water plant to meter all customers in order to prevent waste and require all classes of consumers to pay uniform rates for the water used. *Re Town of Greybull, Docket No. 9139, Sub 1, October 31, 1960.*

Consolidation of Service. The Nebraska commission authorized a telephone co-operative to purchase several local telephone companies with a view to converting them to dial operation with REA funds. *Re Boyd County Teleph. Corp. Application No. 22541, December 21, 1960.*

Intervener. The Louisiana supreme court pointed out that an intervener takes the proceedings as he finds them and cannot substitute himself for one of the parties and urge matters which enlarge the issues. *Rubion Transfer & Storage Co. v. Louisiana Pub. Service Commission, 123 So2d 880.*

Certificate Extension. The New Mexico supreme court held that the commission had not erred in extending a certificate to operate freight line service for the transportation of crude oil where the evidence showed the public need for additional service, the inadequacy of existing services, and that the grant would not result in unnecessary duplication of service in the area. *Western Oil Transp. Co. et al. v. New Mexico State Corp. Commission et al. 355 P2d 923.*

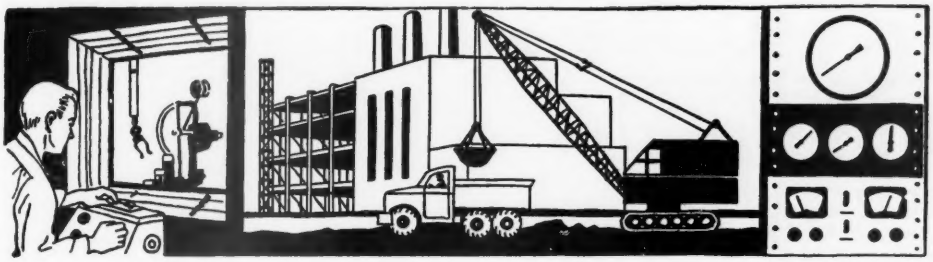
Examiner's Decision. The U. S. district court held that the Interstate Commerce Commission is not bound by an examiner's decision. *T.S.C. Motor Freight Lines et al. v. United States et al. 186 F Supp 777.*

Denial of Reparations. The U. S. district court held that a shipper was not entitled to reparations because a shipment had been routed at a higher cost when it could have been routed under the intrastate rates since the savings clause of the Interstate Commerce Act does not preserve a right of action to a shipper if unrouted shipments have been shipped by other than the cheapest route by the carrier. *Hewitt-Robins, Inc. v. Eastern Freight Ways, Inc. 187 F Supp 722.*

Operation at Loss Not Required. In authorizing a transit rate increase from 12 cents to 15 cents for the first zone, as requested, after which a financial loss will still be incurred, the Maryland commission noted that it cannot under Maryland law require a transit company to continue operations, or any portion thereof, at a financial loss. *Re D. C. Transit System, Inc. et al. Case No. 5692, Order No. 54539, January 12, 1961.*

Household Goods Transportation Refund. The Louisiana commission directed a household goods motor carrier to refund an amount charged a customer for storage and handling upon a showing that the company had given an estimate at the shipping end which was substantially lower than the final charge because it had failed to make the shipper understand that there would be a handling and storage charge. *Louisiana Pub. Service Commission v. Shreveport Moving & Storage, Docket No. 8373, Order No. 8255.*

Industrial Progress



"Ladderway" Is New Delta-Star Cable Tray

"LADDERWAY" is the name given new ladder type cable tray produced H. K. Porter Company, Inc., Delta-Star Electric Division in Chicago. Made to support long stretches of heavy insulated power cables with straight runs and various turns in mills, factories, generating stations, etc. The new tray is economical and needs little maintenance. Dirt and moisture accumulation are held to a minimum. "Ladderway" is available in galvanized steel with standard straight sections of 10 feet and a depth of 3 inches. The rectangular rungs have rounded edges to prevent damage to the cable insulation and there is a choice in rung spacings of 4, 8, and 12 inches, as well as various widths. Installation is fast and easy. Sections are joined together by a rugged single-bolt connection that is easily driven into place. Laboratory tests have proved the new cable tray of lasting durability and strong enough to be thoroughly safe should workmen move about on it during installation.

Indiana & Michigan Electric Company Will Use RCA Microwave Equipment In Extending System

MICROWAVE equipment for a seven-station system linking Indiana & Michigan Electric Company's new speed generating plant near Fairbanks, Ind., with other company facilities will be supplied by the Radio Corporation of America, Walter C. Byrne, Jr., Marketing Manager for RCA's Microwave Department, announced recently.

The 2,000 megacycle system will cover approximately 200 miles, connecting at Marion, Ind., with an existing nine-station RCA system that provides communications to Fort Wayne and South Bend, Mr. Byrne said.

The Breed facility is the world's first 500,000 kilowatt generating plant, operating at a super-critical steam pressure of 3,500 pounds.

The new microwave link will carry six channels of RCA multiplex equipment, providing circuits for telemetering, telephone and VHF radio control, Mr. Byrne said.

He added that the RCA CW-20 equipment incorporates changes necessary to meet the new FCC frequency stability requirements. It also provides hot bilateral radio frequency switchover at repeater stations and terminals for maximum reliability, ease of maintenance and minimum switchover time.

The RCA official said the new microwave link eventually will connect with the extensive system operated by the American Electric Power Company of which Indiana & Michigan is a subsidiary. The AEP System includes forty-five stations and extends south and east to the Roanoke, Va., area.

Rust To Construct 630' Chimney At Penelec Shawville Station

A 630' reinforced concrete chimney, the tallest in the Eastern states, will be constructed by The Rust Engineering Company near Clearfield, Pennsylvania, at the Shawville station of the Pennsylvania Electric Company, Johnstown, Pennsylvania. As a comparison, the chimney will extend 60 feet above the height of the 44-story Gulf Building.

The new chimney is expected to play a major role in reducing air pollution in the vicinity of Shawville, by "pushing" dust and gases into the upper air streams where they will be "lost" amidst other material. Penelec also will increase the power of its precipitators and install a newly designed cleaning system in the air-heaters so that most of the foreign material will be removed from the boiler discharge before it flows into the stack. It will replace two stacks, each 200 feet, now serving two large steam boilers.

Design of the chimney was accomplished on Rust's electronic computer for rapid determination of stresses. It is estimated that this will permit construction to commence three weeks earlier because of the savings in engineering time.

The project is under the direction of Henry H. Folkenson, Superintendent of Plant Construction for the Penelec. Consulting Engineers are Gilbert Associates, Inc., Reading, Pennsylvania, and Jackson & Moreland, Boston, Massachusetts. The Rust Superintendent is Mr. Curtis Lesnett.

New Bulletin Describes G-E's Carrier-Current Systems For Utilities

GENERAL Electric Company has published a bulletin on its complete line of power-line carrier-current equipment for electric utilities manufactured by the Communication Products Department Lynchburg, Va.

The eight-page Bulletin GEA-7204, heavily illustrated with product and application photographs, explains the extensive and versatile communications roles by carrier systems in utilities' installations.

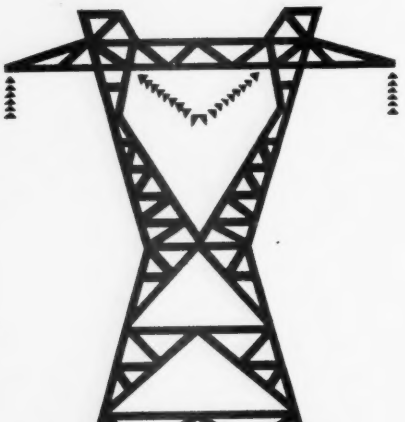
The publication describes the general product categories: transmitter-receivers for general purpose and supervisory control, relaying, telemetering and telephone communications; coupling capacitors and potential devices, and aluminum line traps.

In addition, the modern manufacturing techniques used to maintain high quality standards are outlined.

Bulletin GEA-7204 is available from the General Electric Communication Products Department, P. O. Box 4197, Lynchburg, Va.

(*Continued on page* 16)

INCREASING LOADS + EXPENSIVE RIGHTS-OF-WAY = EHV TRANSMISSION ?



Commonwealth engineers can help your staff review this question and develop the most economical program for your transmission requirements, no matter what voltage is indicated. Our extensive experience with 345 kv and other high voltages assures clients dependable assistance and substantial savings on equipment and structures. Your inquiry is invited.

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$27,745,000 Program Planned By Southern Cal. Gas

APPROVAL of a $27,745,000 plant budget for Southern California Gas Company for 196[illegible] has b[illegible] announced by President and General Manager F. Banks. Along with expenditures planned by South[illegible] Counties Gas Company and Pacific Lighting Gas S[illegible] ply Company, a total of $60 million has been earmarked for additions and improvements to facilities of the th[illegible] Pacific Lighting System companies in Southern C[illegible] fornia during 1961.

This year's budget includes over $9 million for company's portion of the Ivanpah-to-Newberry pi[illegible] line to bring new supplies of gas to Southern Califor[illegible] via the proposed Rock Springs Project. South[illegible] Counties has allocated an additional $3.75 million its portion. This project has been conditionally approv[illegible] both by the Federal Power Commission and by the P[illegible] lic Utilities Commission.

Biggest single item in the company's 196[illegible] budget the $10.3 million provided for the addition of mai[illegible] meters and services to supply new customers. This location is based on the divisions' estimation of an ad[illegible] tional 58,000 new business meter outlets during the ye[illegible] A number of meters will also be removed for freew[illegible] construction, etc., resulting in the net gain of consid[illegible] ably less than 58,000.

Another major expenditure is the $7.2 million p[illegible] vided for distribution and transmission system bett[illegible] ments and replacements.

Other expenditures planned for 1961 include $40[illegible] 000 for furniture, equipment, etc.; $360,000 for bui[illegible] ings, alterations and improvements, and $323,000 [illegible] betterments of underground storage facilities.

Buell Issues New Bulletin

BUELL Engineering Co., Inc., New York 38, N[illegible] York, has recently issued a four (4) page Bulletin [illegible] scribing its complete line of Buell-Norblo dust collecti[illegible] recovery, and classifying equipment.

Air pollution, material handling and classification, [illegible] covery of material from waste gases, and employee co[illegible] fort are a few of the broad areas of application [illegible] Buell-Norblo equipment.

Copies of the Bulletin are available upon request.

Booklet Explains Philco 2000 Data Processing System

THE Philco 2000 electronic data processing system explained in an illustrated brochure just published the company.

The booklet describes in simple non-technical langua[illegible] the features of such parts of the Philco 2000 as the da[illegible] link system; the high speed printer and magnetic dru[illegible] storage.

All major parts of the Philco 2000 are pictured. T[illegible] booklet, which can be read in less than ten minutes, available on request to the Philco Corp., Computer D[illegible] vision, Willow Grove, Pa., Attn: N. P.

First Large Air-Source Heat Pumps Announced

DEVELOPMENT and installation of the first lar[illegible] capacity heat pumps to use outside air as the source

t in winter was announced recently Carrier Air Conditioning Company.

The first two installations will be a factory-warehouse now under nstruction in the South and an ex- ng office building in Detroit, ac- ding to Russell H. Gray, company sident.

The installation at the new $1 mil- n Masland Duraleather Company nt in Mocksville, N. C., is expected start up this winter. It is expected cost only $5,500 a year to operate compared to $10,000 annually for nventional heating and cooling.

The second installation, in a 40- r-old building housing the service ganization of the Detroit Edison mpany, is scheduled for turn-on xt summer. The northern location this narrow structure with large ex- sed areas is expected to prove the acticality of large heat pumps. Val- Engineering Company of Glen- e, Pa., is the consulting engineer both installations.

Last year Carrier officials predicted despread use of heat pumps in large ldings after receiving a contract r an indoor air source system to heat d cool the new eight-story head- arters and research center of the len-Bradley Company in Milwau- e, Wis. That system absorbs sur- us heat generated by people, lights d machines in the interior areas and nsfers it to perimeter offices where at loss is greatest. Its 1,400 tons of oling capacity make it the largest of kind.

To perfect the new system, Carrier veloped a non-freezing method of tracting heat from outside air with mperatures as low as zero degrees. this method, air is pulled through arge coil containing antifreeze, simi- r to that used in automobiles. This uid, at lower temperature than the tside air, absorbs heat from the air. e heat is "pumped" in the refrig- ating machine to water which is cir- lated to air conditioning apparatus roughout the building.

"With water for use as a heat urce not available in sufficient quant- and quality in most geographical eas, almost all large heat pump sys- ms will use either outside air or take at from inside air such as at Allen- radley," Mr. Gray predicted.

Cold and hot water for maintaining e desired temperature and humidity vels will be supplied at Masland by electrically-driven Carrier centrif- al refrigerating machine with 200 ns cooling capacity. Another centrif- ugal chiller rated at 80 tons cooling capacity will provide water for process chilling. Heat from this source will supplement the air conditioning system as an economy measure.

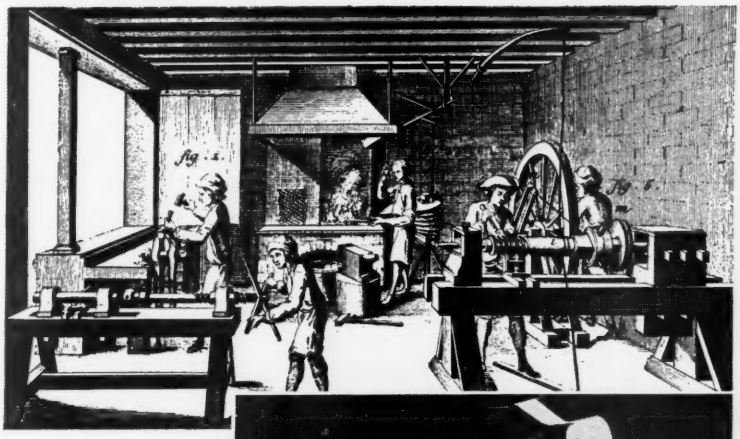
At Masland, the world's largest manufacturer of vinyl upholstery and wall coverings, conditions of 80 degrees in summer, 72 degrees in winter and 50 per cent relative humidity yearround will be maintained throughout the 140,000 square foot plant. The one-story factory will operate on a two-shift basis.

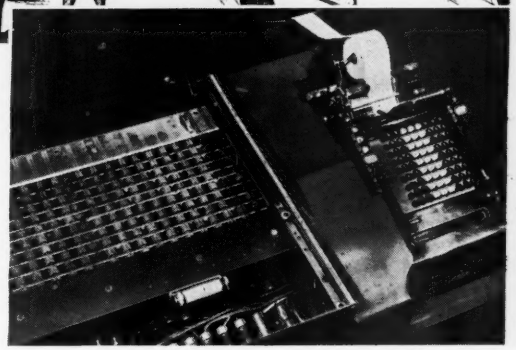
The ownings and operating cost study by William F. Lotz, Inc., engineering firm of Philadelphia, took into account low electric rates resulting from two-shift processing at the Masland plant. First cost for a heat pump or a conventional system would have been about the same, the study showed.

The Detroit Edison system will use two heat pumps with a total of 450 tons capacity. It will be used to evaluate possibilities in various types of buildings in the area.

(*Continued on page* 18)

many steps vs. "ONE"





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Texas Eastern Plans $83 Million Program

TEXAS Eastern Transmission Corporation recently announced plans for an $83 million expansion program which will increase daily delivery capacity of its natural gas pipeline system by 225 million cubic feet.

Plans for the expansion were revealed when the company filed an application with the Federal Power Commission seeking authorization for the project.

The program will include construction of a new pipeline across North Louisiana into Mississippi, construction of four new compressor stations, addition of compressor horsepower at several other stations, construction of numerous loop and lateral pipelines, and necessary metering and regulating facilities, according to Orville S. Carpenter, Texas Eastern president.

Most of the increased quantities gas will go to 27 customers already receiving gas from Texas Eastern. In addition, the increased capacity will allow the company to extend natural gas service to three new customers, he said.

Texas Eastern's FPC application calls for the 225 million cubic feet per day expansion to be accomplished over a two-year period. In the first phase, new facilities will be added that will allow expansion of gas capacity up to 108.8 million cubic feet daily. "We are asking for a decision as soon as possible so that the facilities called for in the first phase can be completed and placed in service before next winter," Mr. Carpenter said. The remaining capacity will be added during 1962.

Gas necessary for the expansion will be provided principally by United Gas Pipe Line Company, Southern Natural Gas Company, and Texas Eastern Transmission Corporation under long-term contracts.

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February 16, 1961.

Hartford Gas To Distribute Cooling And Heating By Pipe

SALE of cooling and heating through utility pipelines is about to begin in Hartford, Conn., and will soon become an important new source of income for utilities in other major cities, an audience of financial, real estate and engineering writers and Hartford business leaders were told recently.

William T. Jebb, president of The Hartford Gas Company, said his utility is investing about $3 million for a central plant and for two miles of steam and chilled water pipelines to establish in downtown Hartford the first-of-its-kind utility service.

The new plant will be completed next year and Mr. Jebb estimates gross revenues from buildings purchasing heating and cooling would reach $1 million to $1.5 million annually within four years. Carrier Air Conditioning Company will produce the huge water chilling machines for the system.

$20,000,000 Program Planned By Houston Lighting & Power

HOUSTON Lighting and Power Company, Houston, Texas, reports that it plans to spend $20,000,000 in 1961 on construction against $3[illegible]000,000 a year ago. This year's outlays will go into distribution and transmission facilities, the company reports.

ioneer Service & Engineering Inst lls Electronic Data P ocessing System

ONEER Service & Engineering of Chicago has installed a new electronic data processing system which will substantially reduce the time required to solve the complex engineering problems encountered in steam, hydro and nuclear power plant design, and to aid in studies relating to electric utility systems growth.

According to the announcement, the new computer, a 1620 being used from International Business Machines Corporation, is the first of its kind installed in a firm in the utilities industry. It is a powerful, compact electronic system designed especially for scientific research, engineering, and management science computations.

"Valuable time-savings within the framework of more advanced techniques are the greatest assets of the system," according to Pioneer President Warren C. Drummond, who announced the installation. In one particular application, for example, the total time necessary to complete a complex systems study has been reduced 75 per cent by using the IBM 1620. This study comprised extensive economic analyses involving simulation and forecasting of needed capacity of utility systems to enable selection of generating units on the most economical basis over a period of years.

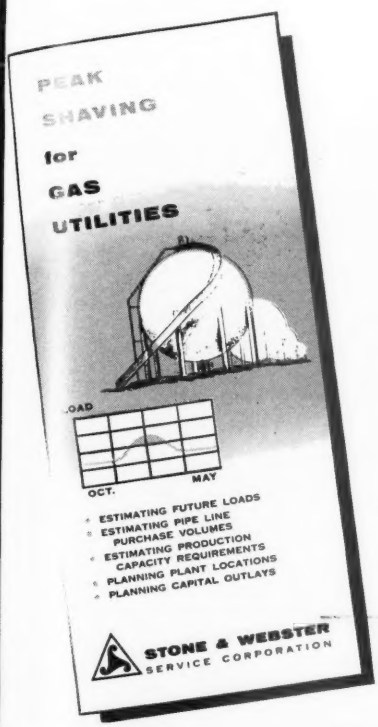
Mr. Drummond pointed out that "the system will enable Pioneer to be of greater service to its customers and reduce substantially the costs and time involved to arrive at the solutions to particular problems. In addition, the scope and depth of present engineering study can be greatly augmented."

Other contemplated uses for the 1620 include feasibility studies relating to power plant computer control, production control, and commercial applications such as stock transfer, payroll, and depreciation studies.

G-E Appointment

C. FREDERICK SCHAUS has been named Manager—Industrial Appearance Design for General Electric Company's Electric Utility Engineering Operation, it was announced recently by C. C. Thomas, Manager—Power Plant Engineering.

Mr. Schaus will be responsible for industrial appearance design of equipment and product systems within the Electric Utility Engineering Operation.



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INDEX TO ADVERTISERS

A

*Allen & Company
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*Allis-Chalmers Manufacturing Company
American Appraisal Company, The 20
*American Motors Corp.
*Analysts Journal, The

B

*Babcock & Wilcox, The
Bechtel Corporation 20
Black & Veatch, Consulting Engineers 20
Blyth & Company, Inc. 18
Boni, Watkins, Jason & Co., Inc. 20
Burns & McDonnell, Engineers 25
Burns & Roe, Inc. 20
*Burroughs Corporation

C

Carter, Earl L., Consulting Engineer 25
Coffin & Richardson, Inc. 25
*Coleman Company, Inc., The
Columbia Gas System, Inc., The 11
*Combustion Engineering, Inc.
Commonwealth Associates, Inc. 16, 20
Commonwealth Services, Inc 16, 20
Consolidated Gas and Services Company 25

D

Dames & Moore 21
Day & Zimmermann, Inc., Engineers 21
*Dodge Division of Chrysler Corp.
Drake & Townsend, Inc. 21

E

*Eastman Dillon, Union Securities & Company
*Ebasco Services Incorporated
*Electro-Motive Division, General Motors
Empire Gas Engineering Company 21

F

*First Boston Corporation, The
Ford, Bacon & Davis, Inc., Engineers 21
Foster Associates, Inc. 21
Francisco & Jacobus 22

G

Gannett Fleming Corddry and Carpenter, Inc. 25
General Electric Company 7, Outside Back Cover
Gibbs & Hill, Inc., Consulting Engineers 22
Gilbert Associates, Inc., Engineers 22
Gilman, W. C., & Company, Engineers 22
*Glore, Forgan & Company

H

*Halsey, Stuart & Company, Inc.
*Harriman, Ripley & Company
Harza Engineering Company 22
Hoosier Engineering Company 22
*Hough, Frank G., Company, The

I

*International Business Machines Corp.
Internuclear Company 25
Irving Trust Company 4

J

Jackson & Moreland, Inc., Engineers 25
Jensen, Bowen & Farrell, Engineers 23

K

*Kellogg, M. W., Company, The
*Kidder, Peabody & Company
*Kuhn Loeb & Company
Kuljian Corporation, The 23

L

*Langley, W. C., & Co.
Leffler, William S., Engineers Associated 23
*Lehman Brothers
*Loeb, (Carl M.) Rhoades & Co.
Lougee, N. A., & Company 23
Lutz & May Company, Consulting Engineers 25

M

Main, Chas. T., Inc., Engineers 23
McCulloch Corporation 5
*Merrill Lynch, Pierce, Fenner & Smith, Inc.
Miner & Miner, Consulting Engineers 25
Moloney Electric Company Inside Back Cover
*Morgan Stanley & Company

N

*National Association of Railroad & Utilities Commissioners

O

*Osmose Wood Preserving Company of America, Inc.

P

Pioneer Services & Engineering Company Inside Front Cover, 23
Pittsburgh Testing Company 25
*Plastics and Coal Chem. Div., Allied Chemical Corp.
*Pole Sprayers, Inc.

R

Ransom, R. A., Company, Inc. 24
Recording & Statistical Corporation 17
Remington Rand Div. of Sperry Rand Company Corporation 9

S

Sanderson & Porter, Engineers 24
Sargent & Lundy, Engineers 24
Schulman, A. S., Electric Co., Engineers 25
*Smith Barney & Company
Standard Research Consultants, Inc. 24
Stone and Webster Engineering Corporation 24
Stone & Webster Service Corporation 19
Sverdrup & Parcel, Engineers & Consultants 25

U

*United States Motors Corporation

W

*Westinghouse Electric Corporation
*White, Weld & Co.
Whitman, Requardt and Associates 24
Williams, A. W., Inspection Co., Inc. 25

Professional Directory 20-25

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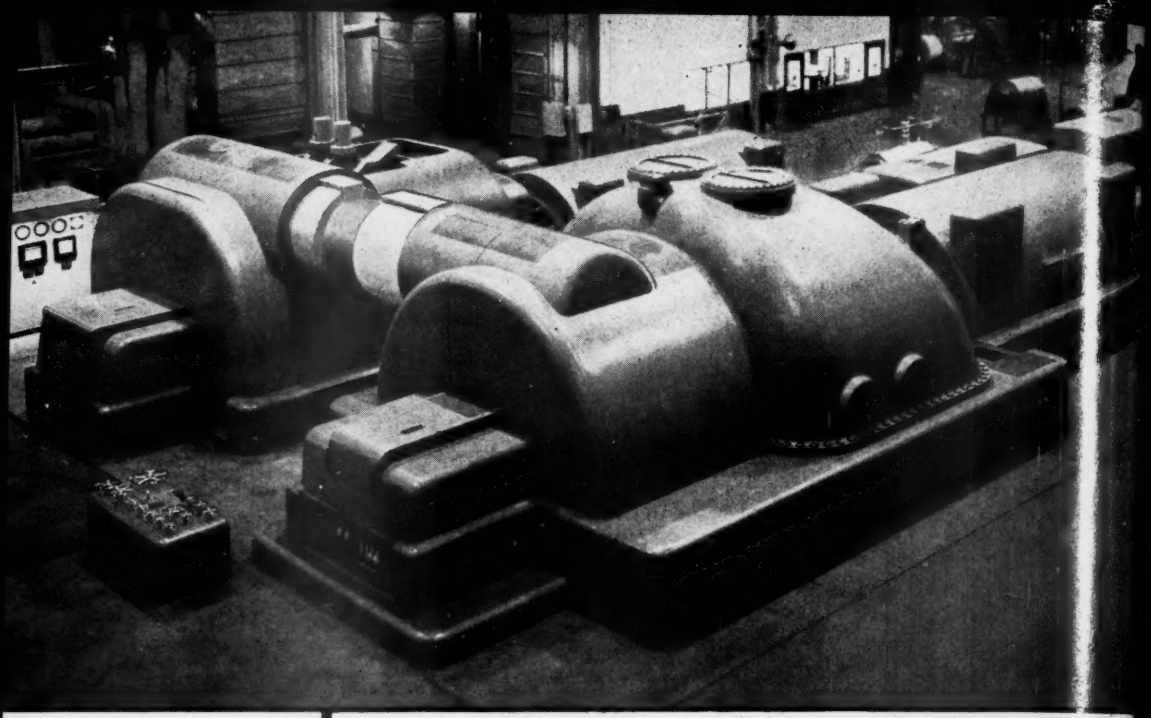

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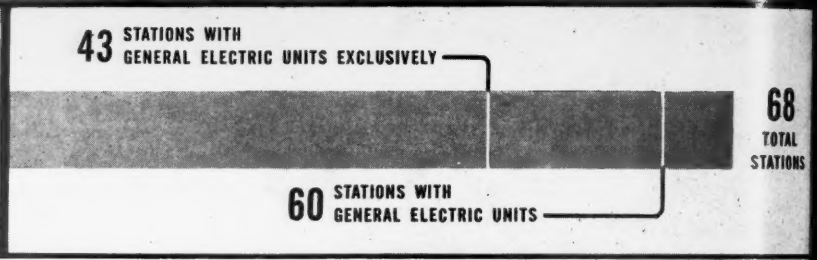

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Best heat rate record: General Electric turbine-generators in 60 of 68 top stations

In 1959, 68 U.S. steam-electric stations had heat rates below 10,000 btu/kwhr*—of these, 60 included General Electric turbine-generators, 43 had G-E units exclusively. Of the 26 stations to reach the goal of 9500 btu/kwhr or better, 23 had G-E units, 17 exclusively.

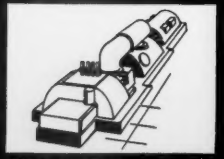
General Electric's record of best stations has been improving annually. So, more and more, installing G-E steam turbine-generators is a major factor in helping you keep power costs low. 244-03

* from FPC report, "Steam-Electric Plant Construction Cost and Annual Production Expenses, 1959."

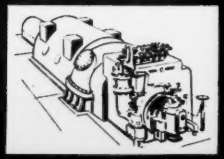
Progress Is Our Most Important Product

GENERAL ELECTRIC

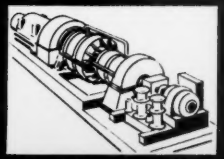
General Electric Turbine-Generators Help Keep Power Costs Low



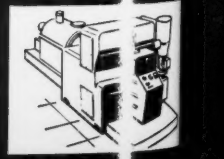
Steam turbine-generators for large blocks of power



Steam turbine-generators 100,000 kw and lower



Gas turbines for peaking, base load, combined cycles



Mechanical drive steam turbines for auxiliaries